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Summary of	Aquarea Split 9 kW STD (J Series)	Reg. No.	011-1W0209
Certificate Holder			
Name	Panasonic Marketing Europe GmbH		
Address	Hagenauer Strasse 43, Wiesbaden	Zip	65203
City	Wiesbaden	Country	Germany
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	Aquarea Split 9 kW STD (J Series)		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass of Refrigerant	1.27 kg		
Certification Date	08.01.2020		
Testing basis	HP KEYMARK certification scheme rules V7		

## Model: WH-ADC0309J3E5 / WH-UD09JE5

Configure model	
Model name	WH-ADC0309J3E5 / WH-UD09JE5
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### Average Climate

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**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW

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COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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COP Tj = -15°C (if TOL<-20°C)	2.44	1.72
Cdh Tj = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	2.62 kW	1.74 kW
Cooling capacity	7.60	7.60
EER	2.90	4.37

<b>EN 14825</b>		
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	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	1:22 h:min
Standby power input	31.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	140 %
COP	3.50
Heating up time	1:22 h:min
Standby power input	30.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	99 %
COP	2.47
Heating up time	1:22 h:min
Standby power input	37.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

# Model: WH-ADC0309J3E5B / WH-UD09JE5

## Configure model

Model name	WH-ADC0309J3E5B / WH-UD09JE5
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

## General Data

Power supply	1x230V 50Hz
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## Heating

### EN 14511-2

	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

### EN 14511-4

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

## Average Climate

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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
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Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW



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COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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COP Tj = -15°C (if TOL<-20°C)	2.44	1.72
Cdh Tj = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	2.62 kW	1.74 kW
Cooling capacity	7.60	7.60
EER	2.90	4.37

<b>EN 14825</b>		
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	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	1:22 h:min
Standby power input	31.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	140 %
COP	3.50
Heating up time	1:22 h:min
Standby power input	30.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	99 %
COP	2.47
Heating up time	1:22 h:min
Standby power input	37.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

# Model: WH-ADC0309J3E5AN / WH-UD09JE5

Configure model	
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Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate

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Cdh Tj = -7 °C	0.980	0.990
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COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
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This information was generated by the HP KEYMARK database on 18 Mar 2022

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COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW



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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
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Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW

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

COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP Tj = -15°C (if TOL<-20°C)	2.44	1.72
Cdh Tj = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	2.62 kW	1.74 kW
Cooling capacity	7.60	7.60
EER	2.90	4.37

<b>EN 14825</b>		
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	1:22 h:min
Standby power input	31.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	140 %
COP	3.50
Heating up time	1:22 h:min
Standby power input	30.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	99 %
COP	2.47
Heating up time	1:22 h:min
Standby power input	37.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

# Model: WH-ADC0309J3E5UK / WH-UD09JE5

Configure model	
Model name	WH-ADC0309J3E5UK / WH-UD09JE5
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate



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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW

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

COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP Tj = -15°C (if TOL<-20°C)	2.44	1.72
Cdh Tj = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	2.62 kW	1.74 kW
Cooling capacity	7.60	7.60
EER	2.90	4.37

<b>EN 14825</b>		
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	1:22 h:min
Standby power input	31.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	140 %
COP	3.50
Heating up time	1:22 h:min
Standby power input	30.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Colder Climate



<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	99 %
COP	2.47
Heating up time	1:22 h:min
Standby power input	37.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Model: WH-SDC0709J3E5 / WH-UD09JE5

Configure model	
Model name	WH-SDC0709J3E5 / WH-UD09JE5
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### Average Climate

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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW

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

COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP Tj = -15°C (if TOL<-20°C)	2.44	1.72
Cdh Tj = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	2.62 kW	1.74 kW
Cooling capacity	7.60	7.60
EER	2.90	4.37

<b>EN 14825</b>		
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

# Model: WH-ADC0309J3E5 / WH-UD09JE5-1

Configure model	
Model name	WH-ADC0309J3E5 / WH-UD09JE5-1
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate

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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW

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

COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP Tj = -15°C (if TOL<-20°C)	2.44	1.72
Cdh Tj = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	3.02 kW	1.74 kW
Cooling capacity	8.20	7.60
EER	2.72	4.37

<b>EN 14825</b>		
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	1:22 h:min
Standby power input	31.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	140 %
COP	3.50
Heating up time	1:22 h:min
Standby power input	30.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	99 %
COP	2.47
Heating up time	1:22 h:min
Standby power input	37.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

# Model: WH-ADC0309J3E5B / WH-UD09JE5-1

Configure model	
Model name	WH-ADC0309J3E5B / WH-UD09JE5-1
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate

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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW



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

COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP T <sub>j</sub> = -15°C (if TOL<-20°C)	2.44	1.72
Cdh T <sub>j</sub> = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	3.02 kW	1.74 kW
Cooling capacity	8.20	7.60
EER	2.72	4.37

<b>EN 14825</b>		
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	1:22 h:min
Standby power input	31.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	140 %
COP	3.50
Heating up time	1:22 h:min
Standby power input	30.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	99 %
COP	2.47
Heating up time	1:22 h:min
Standby power input	37.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

# Model: WH-ADC0309J3E5AN / WH-UD09JE5-1

Configure model	
Model name	WH-ADC0309J3E5AN / WH-UD09JE5-1
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate

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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW



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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW

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

COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP Tj = -15°C (if TOL<-20°C)	2.44	1.72
Cdh Tj = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	3.02 kW	1.74 kW
Cooling capacity	8.20	7.60
EER	2.72	4.37

<b>EN 14825</b>		
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	1:22 h:min
Standby power input	31.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	140 %
COP	3.50
Heating up time	1:22 h:min
Standby power input	30.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	99 %
COP	2.47
Heating up time	1:22 h:min
Standby power input	37.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

# Model: WH-ADC0309J3E5UK / WH-UD09JE5-1

Configure model	
Model name	WH-ADC0309J3E5UK / WH-UD09JE5-1
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate



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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW

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

COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP T <sub>j</sub> = -15°C (if TOL < -20°C)	2.44	1.72
Cdh T <sub>j</sub> = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	3.02 kW	1.74 kW
Cooling capacity	8.20	7.60
EER	2.72	4.37

<b>EN 14825</b>		
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	120 %
COP	3.00
Heating up time	1:22 h:min
Standby power input	31.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	140 %
COP	3.50
Heating up time	1:22 h:min
Standby power input	30.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

## Colder Climate



<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	99 %
COP	2.47
Heating up time	1:22 h:min
Standby power input	37.0 W
Reference hot water temperature	52.3 °C
Mixed water at 40°C	234 l

# Model: WH-SDC0709J3E5 / WH-UD09JE5-1

Configure model	
Model name	WH-SDC0709J3E5 / WH-UD09JE5-1
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate

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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW

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

COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP Tj = -15°C (if TOL<-20°C)	2.44	1.72
Cdh Tj = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	3.02 kW	1.74 kW
Cooling capacity	8.20	7.60
EER	2.72	4.37

<b>EN 14825</b>		
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

# Model: WH-ADC0309J3E5C / WH-UD09JE5-1

Configure model	
Model name	WH-ADC0309J3E5C / WH-UD09JE5-1
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate

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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW

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

COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP T <sub>j</sub> = -15°C (if TOL < -20°C)	2.44	1.72
Cdh T <sub>j</sub> = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	3.02 kW	1.74 kW
Cooling capacity	8.20	7.60
EER	2.72	4.37

<b>EN 14825</b>		
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This information was generated by the HP KEYMARK database on 18 Mar 2022

	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
P <sub>designc</sub>	7.00 kW	kW
SEER	5.08	
P <sub>dc</sub> T <sub>j</sub> = 35°C	7.00 kW	kW
EER T <sub>j</sub> = 35°C	2.95	
P <sub>dc</sub> T <sub>j</sub> = 30°C	5.16 kW	kW
EER T <sub>j</sub> = 30°C	4.00	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 25°C	3.32 kW	kW
EER T <sub>j</sub> = 25°C	5.91	
C <sub>dc</sub>	0.9	
P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
C <sub>dc</sub>	0.9	
P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	116 %
COP	2.90
Heating up time	1:01 h:min
Standby power input	39.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	232 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	134 %
COP	3.35
Heating up time	1:01 h:min
Standby power input	34.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	232 l

## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	98 %
COP	2.45
Heating up time	1:01 h:min
Standby power input	45.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	234 l

# Model: WH-ADC0309J3E5ANC / WH-UD09JE5-1

Configure model	
Model name	WH-ADC0309J3E5ANC / WH-UD09JE5-1
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	9.00 kW	8.95 kW
El input	2.01 kW	3.22 kW
COP	4.48	2.78

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Average Climate

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

**EN 14825**

	Low temperature	Medium temperature
$\eta_s$	193 %	130 %
Prated	7.00 kW	7.00 kW
SCOP	4.90	3.32
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.30 kW	6.20 kW
COP Tj = -7°C	2.80	1.86
Cdh Tj = -7 °C	0.980	0.990
Pdh Tj = +2°C	3.80 kW	3.80 kW
COP Tj = +2°C	5.03	3.33
Cdh Tj = +2 °C	0.940	0.960
Pdh Tj = +7°C	3.00 kW	2.70 kW
COP Tj = +7°C	6.56	4.52
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.47	6.26
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	7.00 kW	6.20 kW
COP Tj = Tbiv	2.60	1.86

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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.00 kW	6.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.80 kW
Annual energy consumption Qhe	2949 kWh	4354 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	227 %	160 %
Prated	7.00 kW	6.00 kW

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

SCOP	5.75	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.10 kW	6.10 kW
COP Tj = +2°C	2.80	2.14
Cdh Tj = +2 °C	0.980	0.980
Pdh Tj = +7°C	4.50 kW	3.80 kW
COP Tj = +7°C	5.37	3.51
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	7.77	5.80
Cdh Tj = +12 °C	0.900	0.920
Pdh Tj = Tbiv	7.10 kW	6.10 kW
COP Tj = Tbiv	2.80	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.10 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.80	2.14
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W

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

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	1627 kWh	1971 kWh

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Colder Climate

<b>EN 14825</b>			
		<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$		164 %	116 %
Prated		7.00 kW	6.00 kW
SCOP		4.18	2.98
T <sub>biv</sub>		-15 °C	-15 °C
TOL		-22 °C	-22 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C		4.20 kW	3.60 kW
COP T <sub>j</sub> = -7°C		3.41	2.41
C <sub>dh</sub> T <sub>j</sub> = -7 °C		0.960	0.970
P <sub>dh</sub> T <sub>j</sub> = +2°C		2.50 kW	2.20 kW



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COP Tj = +2°C	5.39	3.75
Cdh Tj = +2 °C	0.900	0.920
Pdh Tj = +7°C	3.00 kW	2.80 kW
COP Tj = +7°C	6.69	5.01
Cdh Tj = +7 °C	0.900	0.920
Pdh Tj = 12°C	3.40 kW	3.30 kW
COP Tj = 12°C	8.24	6.67
Cdh Tj = +12 °C	0.890	0.910
Pdh Tj = Tbiv	5.70 kW	4.90 kW
COP Tj = Tbiv	2.44	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.70 kW	3.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.82	1.08
WTOL	55 °C	55 °C
Poff	2 W	2 W
PTO	44 W	44 W
PSB	10 W	10 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.30 kW	2.30 kW
Annual energy consumption Qhe	4132 kWh	4967 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.70	4.90

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

COP T <sub>j</sub> = -15°C (if TOL<-20°C)	2.44	1.72
Cdh T <sub>j</sub> = -15 °C	0.980	0.980

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	41 dB(A)	41 dB(A)
Sound power level outdoor	59 dB(A)	59 dB(A)

## Cooling

<b>EN 14511-2</b>		
	<b>+7°C/+12°C</b>	<b>+18°C/+23°C</b>
El input	3.02 kW	1.74 kW
Cooling capacity	8.20	7.60
EER	2.72	4.37

<b>EN 14825</b>		
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P <sub>dc</sub> T <sub>j</sub> = 20°C	1.47 kW	kW
EER T <sub>j</sub> = 20°C	7.54	
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P <sub>off</sub>	8 W	W
PTO	0 W	W
PSB	8 W	W
PCK	0 W	W
Annual energy consumption Q <sub>ce</sub>	482 kWh	kWh

## Domestic Hot Water (DHW)

### Average Climate

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Declared load profile	L
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Reference hot water temperature	52.5 °C
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Declared load profile	L
Efficiency $\eta_{DHW}$	134 %
COP	3.35
Heating up time	1:01 h:min
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## Colder Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	98 %
COP	2.45
Heating up time	1:01 h:min
Standby power input	45.0 W
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