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Summary of	Aquarea Split 12-16 kW STD (H Series)	Reg. No.	011-1W0515
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 12-16 kW STD (H Series)		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R410A		
Mass of Refrigerant	2.55 kg		
Certification Date	08.12.2021		
Testing basis	HP KEYMARK certification scheme rules rev. 9		

## Model: WH-ADC1216H6E5 / WH-UD12HE5

Configure model	
Model name	WH-ADC1216H6E5 / WH-UD12HE5
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

### Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.53 kW	4.10 kW
COP	4.74	2.93

### Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	134 %
Prated	10.00 kW	8.00 kW
SCOP	4.82	3.42
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	7.20 kW
COP Tj = -7°C	3.18	2.27
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.20 kW	4.30 kW
COP Tj = +2°C	4.67	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.20 kW	4.90 kW
COP Tj = +7°C	6.15	4.36
Cdh Tj = +7 °C	0.990	0.990

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Pdh Tj = 12°C	6.10 kW	5.80 kW
COP Tj = 12°C	7.88	6.12
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.00 kW	8.00 kW
COP Tj = Tbiv	2.68	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4286 kWh	4840 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	159 %
Prated	11.00 kW	9.00 kW
SCOP	6.21	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.20 kW	9.40 kW
COP Tj = +2°C	3.61	2.43
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.10 kW	6.10 kW
COP Tj = +7°C	5.53	3.29
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.90 kW
COP Tj = 12°C	7.82	5.51
Cdh Tj = +12 °C	0.980	0.990

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Pdh Tj = Tbiv	11.20 kW	9.40 kW
COP Tj = Tbiv	3.61	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.20 kW	9.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.61	2.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2368 kWh	2970 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	95 %
COP	2.37
Heating up time	0:58 h:min
Standby power input	42.0 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	256 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	110 %
COP	2.75
Heating up time	0:58 h:min
Standby power input	36.0 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	256 l

# Model: WH-ADC1216H6E5UK / WH-UD12HE5

Configure model	
Model name	WH-ADC1216H6E5UK / WH-UD12HE5
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.53 kW	4.10 kW
COP	4.74	2.93

## Average Climate



### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	134 %
Prated	10.00 kW	8.00 kW
SCOP	4.82	3.42
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	7.20 kW
COP Tj = -7°C	3.18	2.27
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.20 kW	4.30 kW
COP Tj = +2°C	4.67	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.20 kW	4.90 kW
COP Tj = +7°C	6.15	4.36
Cdh Tj = +7 °C	0.990	0.990

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Pdh Tj = 12°C	6.10 kW	5.80 kW
COP Tj = 12°C	7.88	6.12
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.00 kW	8.00 kW
COP Tj = Tbiv	2.68	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4286 kWh	4840 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	159 %
Prated	11.00 kW	9.00 kW
SCOP	6.21	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.20 kW	9.40 kW
COP Tj = +2°C	3.61	2.43
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.10 kW	6.10 kW
COP Tj = +7°C	5.53	3.29
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.90 kW
COP Tj = 12°C	7.82	5.51
Cdh Tj = +12 °C	0.980	0.990

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Pdh Tj = Tbiv	11.20 kW	9.40 kW
COP Tj = Tbiv	3.61	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.20 kW	9.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.61	2.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2368 kWh	2970 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	95 %
COP	2.37
Heating up time	0:58 h:min
Standby power input	42.0 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	256 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	110 %
COP	2.75
Heating up time	0:58 h:min
Standby power input	36.0 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	256 l

# Model: WH-ADC1216H6E5C / WH-UD12HE5

Configure model	
Model name	WH-ADC1216H6E5C / WH-UD12HE5
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.53 kW	4.10 kW
COP	4.74	2.93

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	134 %
Prated	10.00 kW	8.00 kW
SCOP	4.82	3.42
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	7.20 kW
COP Tj = -7°C	3.18	2.27
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.20 kW	4.30 kW
COP Tj = +2°C	4.67	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.20 kW	4.90 kW
COP Tj = +7°C	6.15	4.36
Cdh Tj = +7 °C	0.990	0.990

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Pdh Tj = 12°C	6.10 kW	5.80 kW
COP Tj = 12°C	7.88	6.12
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.00 kW	8.00 kW
COP Tj = Tbiv	2.68	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4286 kWh	4840 kWh

## Warmer Climate



### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	159 %
Prated	11.00 kW	9.00 kW
SCOP	6.21	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.20 kW	9.40 kW
COP Tj = +2°C	3.61	2.43
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.10 kW	6.10 kW
COP Tj = +7°C	5.53	3.29
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.90 kW
COP Tj = 12°C	7.82	5.51
Cdh Tj = +12 °C	0.980	0.990

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Pdh Tj = Tbiv	11.20 kW	9.40 kW
COP Tj = Tbiv	3.61	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.20 kW	9.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.61	2.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2368 kWh	2970 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	92 %
COP	2.31
Heating up time	0:54 h:min
Standby power input	39.0 W
Reference hot water temperature	53.1 °C
Mixed water at 40°C	228 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	107 %
COP	2.68
Heating up time	0:54 h:min
Standby power input	32.0 W
Reference hot water temperature	53.1 °C
Mixed water at 40°C	228 l

## Model: WH-ADC0916H9E8 / WH-UD12HE8

Configure model	
Model name	WH-ADC0916H9E8 / WH-UD12HE8
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

### Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.53 kW	4.10 kW
COP	4.74	2.93

### Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	134 %
Prated	10.00 kW	8.00 kW
SCOP	4.82	3.42
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	7.20 kW
COP Tj = -7°C	3.18	2.27
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.20 kW	4.30 kW
COP Tj = +2°C	4.67	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.20 kW	4.90 kW
COP Tj = +7°C	6.15	4.36
Cdh Tj = +7 °C	0.990	0.990

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Pdh Tj = 12°C	6.10 kW	5.80 kW
COP Tj = 12°C	7.88	6.12
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.00 kW	8.00 kW
COP Tj = Tbiv	2.68	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4286 kWh	4840 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	159 %
Prated	11.00 kW	9.00 kW
SCOP	6.21	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.20 kW	9.40 kW
COP Tj = +2°C	3.61	2.43
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.10 kW	6.10 kW
COP Tj = +7°C	5.53	3.29
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.90 kW
COP Tj = 12°C	7.82	5.51
Cdh Tj = +12 °C	0.980	0.990

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Pdh Tj = Tbiv	11.20 kW	9.40 kW
COP Tj = Tbiv	3.61	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.20 kW	9.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.61	2.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2368 kWh	2970 kWh

## Domestic Hot Water (DHW)

### Average Climate



<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	95 %
COP	2.37
Heating up time	0:58 h:min
Standby power input	42.0 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	256 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	110 %
COP	2.75
Heating up time	0:58 h:min
Standby power input	36.0 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	256 l

# Model: WH-ADC0916H9E8AN / WH-UD12HE8

Configure model	
Model name	WH-ADC0916H9E8AN / WH-UD12HE8
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

## Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.53 kW	4.10 kW
COP	4.74	2.93

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	134 %
Prated	10.00 kW	8.00 kW
SCOP	4.82	3.42
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	7.20 kW
COP Tj = -7°C	3.18	2.27
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.20 kW	4.30 kW
COP Tj = +2°C	4.67	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.20 kW	4.90 kW
COP Tj = +7°C	6.15	4.36
Cdh Tj = +7 °C	0.990	0.990

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Pdh Tj = 12°C	6.10 kW	5.80 kW
COP Tj = 12°C	7.88	6.12
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.00 kW	8.00 kW
COP Tj = Tbiv	2.68	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4286 kWh	4840 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	159 %
Prated	11.00 kW	9.00 kW
SCOP	6.21	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.20 kW	9.40 kW
COP Tj = +2°C	3.61	2.43
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.10 kW	6.10 kW
COP Tj = +7°C	5.53	3.29
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.90 kW
COP Tj = 12°C	7.82	5.51
Cdh Tj = +12 °C	0.980	0.990

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

Pdh Tj = Tbiv	11.20 kW	9.40 kW
COP Tj = Tbiv	3.61	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.20 kW	9.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.61	2.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2368 kWh	2970 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	95 %
COP	2.37
Heating up time	0:58 h:min
Standby power input	42.0 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	256 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	110 %
COP	2.75
Heating up time	0:58 h:min
Standby power input	36.0 W
Reference hot water temperature	52.7 °C
Mixed water at 40°C	256 l

## Model: WH-ADC1216H6E5 / WH-UD16HE5

Configure model	
Model name	WH-ADC1216H6E5 / WH-UD16HE5
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

### Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	14.50 kW
El input	3.74 kW	5.33 kW
COP	4.28	2.72

### Average Climate



### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	130 %
Prated	12.00 kW	13.00 kW
SCOP	4.82	3.33
Tbiv	-10 °C	-3 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.10 kW	9.00 kW
COP Tj = -7°C	2.90	2.07
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.40 kW	7.10 kW
COP Tj = +2°C	4.83	3.29
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.90 kW
COP Tj = +7°C	6.11	4.85
Cdh Tj = +7 °C	0.990	0.990

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

Pdh Tj = 12°C	6.20 kW	5.80 kW
COP Tj = 12°C	7.59	6.11
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.80 kW	9.50 kW
COP Tj = Tbiv	2.77	2.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	4.30 kW
Annual energy consumption Qhe	5146 kWh	8076 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	169 %
Prated	13.00 kW	10.00 kW
SCOP	6.20	4.30
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.50 kW	10.70 kW
COP Tj = +2°C	3.34	2.41
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	8.40 kW	6.70 kW
COP Tj = +7°C	5.61	3.79
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.20 kW	5.90 kW
COP Tj = 12°C	7.72	5.46
Cdh Tj = +12 °C	0.990	0.990

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

Pdh Tj = Tbiv	12.50 kW	10.70 kW
COP Tj = Tbiv	3.34	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.50 kW	10.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.34	2.41
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	2801 kWh	3104 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	91 %
COP	2.27
Heating up time	0:44 h:min
Standby power input	41.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	253 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	107 %
COP	2.67
Heating up time	0:44 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	253 l

# Model: WH-ADC1216H6E5UK / WH-UD16HE5

Configure model	
Model name	WH-ADC1216H6E5UK / WH-UD16HE5
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	14.50 kW
El input	3.74 kW	5.33 kW
COP	4.28	2.72

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	130 %
Prated	12.00 kW	13.00 kW
SCOP	4.82	3.33
Tbiv	-10 °C	-3 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.10 kW	9.00 kW
COP Tj = -7°C	2.90	2.07
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.40 kW	7.10 kW
COP Tj = +2°C	4.83	3.29
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.90 kW
COP Tj = +7°C	6.11	4.85
Cdh Tj = +7 °C	0.990	0.990

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

Pdh Tj = 12°C	6.20 kW	5.80 kW
COP Tj = 12°C	7.59	6.11
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.80 kW	9.50 kW
COP Tj = Tbiv	2.77	2.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	4.30 kW
Annual energy consumption Qhe	5146 kWh	8076 kWh

## Warmer Climate



### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	169 %
Prated	13.00 kW	10.00 kW
SCOP	6.20	4.30
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.50 kW	10.70 kW
COP Tj = +2°C	3.34	2.41
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	8.40 kW	6.70 kW
COP Tj = +7°C	5.61	3.79
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.20 kW	5.90 kW
COP Tj = 12°C	7.72	5.46
Cdh Tj = +12 °C	0.990	0.990

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

Pdh Tj = Tbiv	12.50 kW	10.70 kW
COP Tj = Tbiv	3.34	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.50 kW	10.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.34	2.41
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	2801 kWh	3104 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	91 %
COP	2.27
Heating up time	0:44 h:min
Standby power input	41.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	253 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	107 %
COP	2.67
Heating up time	0:44 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	253 l

# Model: WH-ADC1216H6E5C / WH-UD16HE5

Configure model	
Model name	WH-ADC1216H6E5C / WH-UD16HE5
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

## Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	14.50 kW
El input	3.74 kW	5.33 kW
COP	4.28	2.72

## Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	130 %
Prated	12.00 kW	13.00 kW
SCOP	4.82	3.33
Tbiv	-10 °C	-3 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.10 kW	9.00 kW
COP Tj = -7°C	2.90	2.07
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.40 kW	7.10 kW
COP Tj = +2°C	4.83	3.29
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.90 kW
COP Tj = +7°C	6.11	4.85
Cdh Tj = +7 °C	0.990	0.990

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

Pdh Tj = 12°C	6.20 kW	5.80 kW
COP Tj = 12°C	7.59	6.11
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.80 kW	9.50 kW
COP Tj = Tbiv	2.77	2.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	4.30 kW
Annual energy consumption Qhe	5146 kWh	8076 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	169 %
Prated	13.00 kW	10.00 kW
SCOP	6.20	4.30
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.50 kW	10.70 kW
COP Tj = +2°C	3.34	2.41
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	8.40 kW	6.70 kW
COP Tj = +7°C	5.61	3.79
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.20 kW	5.90 kW
COP Tj = 12°C	7.72	5.46
Cdh Tj = +12 °C	0.990	0.990

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

Pdh Tj = Tbiv	12.50 kW	10.70 kW
COP Tj = Tbiv	3.34	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.50 kW	10.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.34	2.41
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	2801 kWh	3104 kWh

## Domestic Hot Water (DHW)

### Average Climate



<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	88 %
COP	2.21
Heating up time	0:48 h:min
Standby power input	35.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	225 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	104 %
COP	2.60
Heating up time	0:44 h:min
Standby power input	32.0 W
Reference hot water temperature	52.6 °C
Mixed water at 40°C	225 l

## Model: WH-ADC0916H9E8 / WH-UD16HE8

Configure model	
Model name	WH-ADC0916H9E8 / WH-UD16HE8
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

### Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	14.50 kW
El input	3.74 kW	5.33 kW
COP	4.28	2.72

### Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	130 %
Prated	12.00 kW	13.00 kW
SCOP	4.82	3.33
Tbiv	-10 °C	-3 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.10 kW	9.00 kW
COP Tj = -7°C	2.90	2.07
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.40 kW	7.10 kW
COP Tj = +2°C	4.83	3.29
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.90 kW
COP Tj = +7°C	6.11	4.85
Cdh Tj = +7 °C	0.990	0.990

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

Pdh Tj = 12°C	6.20 kW	5.80 kW
COP Tj = 12°C	7.59	6.11
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.80 kW	9.50 kW
COP Tj = Tbiv	2.77	2.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	4.30 kW
Annual energy consumption Qhe	5146 kWh	8076 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	169 %
Prated	13.00 kW	10.00 kW
SCOP	6.20	4.30
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.50 kW	10.70 kW
COP Tj = +2°C	3.34	2.41
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	8.40 kW	6.70 kW
COP Tj = +7°C	5.61	3.79
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.20 kW	5.90 kW
COP Tj = 12°C	7.72	5.46
Cdh Tj = +12 °C	0.990	0.990

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

Pdh Tj = Tbiv	12.50 kW	10.70 kW
COP Tj = Tbiv	3.34	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.50 kW	10.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.34	2.41
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	2801 kWh	3104 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	91 %
COP	2.27
Heating up time	0:44 h:min
Standby power input	41.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	253 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	107 %
COP	2.67
Heating up time	0:44 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	253 l

# Model: WH-ADC0916H9E8AN / WH-UD16HE8

Configure model	
Model name	WH-ADC0916H9E8AN / WH-UD16HE8
Application	Heating + DHW + low temp
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

## Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	14.50 kW
El input	3.74 kW	5.33 kW
COP	4.28	2.72

## Average Climate



### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	130 %
Prated	12.00 kW	13.00 kW
SCOP	4.82	3.33
Tbiv	-10 °C	-3 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.10 kW	9.00 kW
COP Tj = -7°C	2.90	2.07
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.40 kW	7.10 kW
COP Tj = +2°C	4.83	3.29
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.90 kW
COP Tj = +7°C	6.11	4.85
Cdh Tj = +7 °C	0.990	0.990

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

Pdh Tj = 12°C	6.20 kW	5.80 kW
COP Tj = 12°C	7.59	6.11
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.80 kW	9.50 kW
COP Tj = Tbiv	2.77	2.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	4.30 kW
Annual energy consumption Qhe	5146 kWh	8076 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	169 %
Prated	13.00 kW	10.00 kW
SCOP	6.20	4.30
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.50 kW	10.70 kW
COP Tj = +2°C	3.34	2.41
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	8.40 kW	6.70 kW
COP Tj = +7°C	5.61	3.79
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.20 kW	5.90 kW
COP Tj = 12°C	7.72	5.46
Cdh Tj = +12 °C	0.990	0.990

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

Pdh Tj = Tbiv	12.50 kW	10.70 kW
COP Tj = Tbiv	3.34	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.50 kW	10.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.34	2.41
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	2801 kWh	3104 kWh

## Domestic Hot Water (DHW)

### Average Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	91 %
COP	2.27
Heating up time	0:44 h:min
Standby power input	41.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	253 l

## Warmer Climate

<b>EN 16147</b>	
Declared load profile	L
Efficiency $\eta_{DHW}$	107 %
COP	2.67
Heating up time	0:44 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	253 l

## Model: WH-SDC12H6E5 / WH-UD12HE5

Configure model	
Model name	WH-SDC12H6E5 / WH-UD12HE5
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

### Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.53 kW	4.10 kW
COP	4.74	2.93

### Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	134 %
Prated	10.00 kW	8.00 kW
SCOP	4.82	3.42
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	7.20 kW
COP Tj = -7°C	3.18	2.27
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.20 kW	4.30 kW
COP Tj = +2°C	4.67	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.20 kW	4.90 kW
COP Tj = +7°C	6.15	4.36
Cdh Tj = +7 °C	0.990	0.990

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

Pdh Tj = 12°C	6.10 kW	5.80 kW
COP Tj = 12°C	7.88	6.12
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.00 kW	8.00 kW
COP Tj = Tbiv	2.68	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4286 kWh	4840 kWh

## Warmer Climate



### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	159 %
Prated	11.00 kW	9.00 kW
SCOP	6.21	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.20 kW	9.40 kW
COP Tj = +2°C	3.61	2.43
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.10 kW	6.10 kW
COP Tj = +7°C	5.53	3.29
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.90 kW
COP Tj = 12°C	7.82	5.51
Cdh Tj = +12 °C	0.980	0.990

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

Pdh Tj = Tbiv	11.20 kW	9.40 kW
COP Tj = Tbiv	3.61	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.20 kW	9.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.61	2.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2368 kWh	2970 kWh

## Model: WH-SDC12H9E8 / WH-UD12HE8

Configure model	
Model name	WH-SDC12H9E8 / WH-UD12HE8
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

### Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.53 kW	4.10 kW
COP	4.74	2.93

### Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	134 %
Prated	10.00 kW	8.00 kW
SCOP	4.82	3.42
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	7.20 kW
COP Tj = -7°C	3.18	2.27
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	5.20 kW	4.30 kW
COP Tj = +2°C	4.67	3.25
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.20 kW	4.90 kW
COP Tj = +7°C	6.15	4.36
Cdh Tj = +7 °C	0.990	0.990

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

Pdh Tj = 12°C	6.10 kW	5.80 kW
COP Tj = 12°C	7.88	6.12
Cdh Tj = +12 °C	0.980	0.990
Pdh Tj = Tbiv	10.00 kW	8.00 kW
COP Tj = Tbiv	2.68	2.05
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	8.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.68	2.05
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4286 kWh	4840 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	159 %
Prated	11.00 kW	9.00 kW
SCOP	6.21	4.05
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.20 kW	9.40 kW
COP Tj = +2°C	3.61	2.43
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	7.10 kW	6.10 kW
COP Tj = +7°C	5.53	3.29
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.00 kW	5.90 kW
COP Tj = 12°C	7.82	5.51
Cdh Tj = +12 °C	0.980	0.990

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

Pdh Tj = Tbiv	11.20 kW	9.40 kW
COP Tj = Tbiv	3.61	2.43
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.20 kW	9.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.61	2.43
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2368 kWh	2970 kWh

## Model: WH-SDC12H6E5 / WH-UD16HE5

Configure model	
Model name	WH-SDC12H6E5 / WH-UD16HE5
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

### Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	14.50 kW
El input	3.74 kW	5.33 kW
COP	4.28	2.72

### Average Climate



### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	130 %
Prated	12.00 kW	13.00 kW
SCOP	4.82	3.33
Tbiv	-10 °C	-3 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.10 kW	9.00 kW
COP Tj = -7°C	2.90	2.07
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.40 kW	7.10 kW
COP Tj = +2°C	4.83	3.29
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.90 kW
COP Tj = +7°C	6.11	4.85
Cdh Tj = +7 °C	0.990	0.990

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

Pdh Tj = 12°C	6.20 kW	5.80 kW
COP Tj = 12°C	7.59	6.11
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.80 kW	9.50 kW
COP Tj = Tbiv	2.77	2.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	4.30 kW
Annual energy consumption Qhe	5146 kWh	8076 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	169 %
Prated	13.00 kW	10.00 kW
SCOP	6.20	4.30
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.50 kW	10.70 kW
COP Tj = +2°C	3.34	2.41
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	8.40 kW	6.70 kW
COP Tj = +7°C	5.61	3.79
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.20 kW	5.90 kW
COP Tj = 12°C	7.72	5.46
Cdh Tj = +12 °C	0.990	0.990

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

Pdh Tj = Tbiv	12.50 kW	10.70 kW
COP Tj = Tbiv	3.34	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.50 kW	10.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.34	2.41
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	2801 kWh	3104 kWh

## Model: WH-SDC16H9E8 / WH-UD16HE8

Configure model	
Model name	WH-SDC16H9E8 / WH-UD16HE8
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

### Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	14.50 kW
El input	3.74 kW	5.33 kW
COP	4.28	2.72

### Average Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	190 %	130 %
Prated	12.00 kW	13.00 kW
SCOP	4.82	3.33
Tbiv	-10 °C	-3 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.10 kW	9.00 kW
COP Tj = -7°C	2.90	2.07
Cdh Tj = -7 °C	1.000	1.000
Pdh Tj = +2°C	6.40 kW	7.10 kW
COP Tj = +2°C	4.83	3.29
Cdh Tj = +2 °C	0.990	0.990
Pdh Tj = +7°C	5.30 kW	4.90 kW
COP Tj = +7°C	6.11	4.85
Cdh Tj = +7 °C	0.990	0.990

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

Pdh Tj = 12°C	6.20 kW	5.80 kW
COP Tj = 12°C	7.59	6.11
Cdh Tj = +12 °C	0.990	0.990
Pdh Tj = Tbiv	11.80 kW	9.50 kW
COP Tj = Tbiv	2.77	2.46
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.80 kW	8.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.20 kW	4.30 kW
Annual energy consumption Qhe	5146 kWh	8076 kWh

## Warmer Climate

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	46 dB(A)	46 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	245 %	169 %
Prated	13.00 kW	10.00 kW
SCOP	6.20	4.30
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.50 kW	10.70 kW
COP Tj = +2°C	3.34	2.41
Cdh Tj = +2 °C	1.000	1.000
Pdh Tj = +7°C	8.40 kW	6.70 kW
COP Tj = +7°C	5.61	3.79
Cdh Tj = +7 °C	0.990	0.990
Pdh Tj = 12°C	6.20 kW	5.90 kW
COP Tj = 12°C	7.72	5.46
Cdh Tj = +12 °C	0.990	0.990



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

Pdh Tj = Tbiv	12.50 kW	10.70 kW
COP Tj = Tbiv	3.34	2.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.50 kW	10.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.34	2.41
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	3 W	3 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	2801 kWh	3104 kWh