

## Subtype RAS-5WH(V)RP2E

Certificate Holder	Johnson Controls-Hitachi AirConditioning Spain
Address	Ronda Shimizu, 1. Pol. Ind. Can Torrella
ZIP	08233
City	Vacarisses, Barcelona
Country	ES
Certification Body	BRE Global Limited
Subtype title	RAS-5WH(V)RP2E
Registration number	041-K002-74
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	2.1 kg
Certification Date	05.09.2025
Testing basis	Heat Pump Keymark Scheme Rules Rev 15
Testing laboratory	Centro de Ensayos, Innovación y Servicios (CEIS), ES

## Model 01. RAS-5WHVRP2E + RWM-5R3E - Heating Only

Model name	01. RAS-5WHVRP2E + RWM-5R3E - Heating Only
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

### General data

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

### Outdoor Air/Water

#### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

#### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.48 kW	4.71 kW
COP	4.83	2.55

#### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	176 %	127 %
Prated	13.00 kW	14.00 kW
SCOP	4.48	3.26
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	12.40 kW
COP Tj = -7°C	2.91	2.09
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	7.55 kW
COP Tj = +2°C	4.35	3.10
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.50 kW	4.85 kW

COP Tj = +7°C	5.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.10 kW	4.23 kW
COP Tj = 12°C	8.04	6.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	12.40 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	12.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.60 kW
Annual energy consumption Qhe	5991 kWh	8886 kWh

## Model 02. RAS-5WHVRP2E + RWM-5R3E - With Cooling Kit

Model name	02. RAS-5WHVRP2E + RWM-5R3E - With Cooling Kit
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

### General data

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

### Outdoor Air/Water

#### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

#### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.48 kW	4.71 kW
COP	4.83	2.55

#### EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	10.00 kW	12.00 kW
Cooling capacity	3.39	2.93
EER	2.95	4.10

#### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	178 %	128 %
Prated	13.00 kW	14.00 kW
SCOP	4.52	3.28
Tbiv	-7 °C	-7 °C

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	12.40 kW
COP Tj = -7°C	2.91	2.09
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	7.55 kW
COP Tj = +2°C	4.35	3.10
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.50 kW	4.85 kW
COP Tj = +7°C	5.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.10 kW	4.23 kW
COP Tj = 12°C	8.04	6.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	12.40 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	12.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.60 kW
Annual energy consumption Qhe	5939 kWh	8834 kWh

#### EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	10.00 kW	12.00 kW
SEER	4.71	7.59
Pdc Tj = 35°C	10.00 kW	12.00 kW
EER Tj = 35°C	2.95	4.09
Cdc Tj = 35 °C	0.900	0.900
Pdc Tj = 30°C	7.37 kW	8.84 kW
EER Tj = 30°C	4.11	6.34
Cdc Tj = 30 °C	0.900	0.900
Pdc Tj = 25°C	4.74 kW	6.00 kW
EER Tj = 25°C	5.57	8.49
Cdc Tj = 25 °C	0.900	0.900
Pdc Tj = 20°C	3.55 kW	4.90 kW
EER Tj = 20°C	5.74	12.40
Cdc Tj = 20 °C	0.900	0.900

Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	1275 kWh	949 kWh

## Model 05. RAS-5WHRP2E + RWM-5R3E - Heating Only

Model name	05. RAS-5WHRP2E + RWM-5R3E - Heating Only
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

### General data

Power supply	3x400V 50Hz
Off-peak product	n/a

### Outdoor Air/Water

#### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

#### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.48 kW	4.71 kW
COP	4.83	2.55

#### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	176 %	127 %
Prated	13.00 kW	14.00 kW
SCOP	4.48	3.26
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	12.40 kW
COP Tj = -7°C	2.91	2.09
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	7.55 kW
COP Tj = +2°C	4.35	3.10
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.50 kW	4.85 kW

COP Tj = +7°C	5.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.10 kW	4.23 kW
COP Tj = 12°C	8.04	6.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	12.40 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	12.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.60 kW
Annual energy consumption Qhe	5991 kWh	8886 kWh



## Model 06. RAS-5WHRP2E + RWM-5R3E - With Cooling Kit

Model name	06. RAS-5WHRP2E + RWM-5R3E - With Cooling Kit
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

### General data

Power supply	3x400V 50Hz
Off-peak product	n/a

### Outdoor Air/Water

#### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

#### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.48 kW	4.71 kW
COP	4.83	2.55

#### EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	10.00 kW	12.00 kW
Cooling capacity	3.39	2.93
EER	2.95	4.10

#### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	178 %	128 %
Prated	13.00 kW	14.00 kW
SCOP	4.52	3.28
Tbiv	-7 °C	-7 °C

TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	12.40 kW
COP Tj = -7°C	2.91	2.09
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	7.55 kW
COP Tj = +2°C	4.35	3.10
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.50 kW	4.85 kW
COP Tj = +7°C	5.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.10 kW	4.23 kW
COP Tj = 12°C	8.04	6.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	12.40 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	12.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.60 kW
Annual energy consumption Qhe	5939 kWh	8834 kWh

#### EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	10.00 kW	12.00 kW
SEER	4.71	7.59
Pdc Tj = 35°C	10.00 kW	12.00 kW
EER Tj = 35°C	2.95	4.09
Cdc Tj = 35 °C	0.900	0.900
Pdc Tj = 30°C	7.37 kW	8.84 kW
EER Tj = 30°C	4.11	6.34
Cdc Tj = 30 °C	0.900	0.900
Pdc Tj = 25°C	4.74 kW	6.00 kW
EER Tj = 25°C	5.57	8.49
Cdc Tj = 25 °C	0.900	0.900
Pdc Tj = 20°C	3.55 kW	4.90 kW
EER Tj = 20°C	5.74	12.40
Cdc Tj = 20 °C	0.900	0.900

Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	1275 kWh	949 kWh

### Model 03. RAS-5WHVRP2E + RWD-5RW3E-220S(-K) - Heating Only

Model name	03. RAS-5WHVRP2E + RWD-5RW3E-220S(-K) - Heating Only
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

### General data

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

### Outdoor Air/Water

#### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	112 %
COP	2.73
Heating up time	1:08 h:min
Standby power input	43.0 W
Reference hot water temperature	52.0 °C
Mixed water at 40°C	273 l

#### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

#### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.48 kW	4.71 kW
COP	4.83	2.55

#### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	176 %	127 %
Prated	13.00 kW	14.00 kW

SCOP	4.48	3.26
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	12.40 kW
COP Tj = -7°C	2.91	2.09
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	7.55 kW
COP Tj = +2°C	4.35	3.10
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.50 kW	4.85 kW
COP Tj = +7°C	5.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.10 kW	4.23 kW
COP Tj = 12°C	8.04	6.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	12.40 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	12.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.60 kW
Annual energy consumption Qhe	5991 kWh	8886 kWh

## Model 04. RAS-5WHVRP2E + RWD-5RW3E-220S(-K) - With Cooling Kit

Model name	04. RAS-5WHVRP2E + RWD-5RW3E-220S(-K) - With Cooling Kit
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

### General data

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

### Outdoor Air/Water

#### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	112 %
COP	2.73
Heating up time	1:08 h:min
Standby power input	43.0 W
Reference hot water temperature	52.0 °C
Mixed water at 40°C	273 l

#### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

#### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.48 kW	4.71 kW
COP	4.83	2.55

#### EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	10.00 kW	12.00 kW
Cooling capacity	3.39	2.93
EER	2.95	4.10

#### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	178 %	128 %
Prated	13.00 kW	14.00 kW
SCOP	4.52	3.28
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	12.40 kW
COP Tj = -7°C	2.91	2.09
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	7.55 kW
COP Tj = +2°C	4.35	3.10
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.50 kW	4.85 kW
COP Tj = +7°C	5.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.10 kW	4.23 kW
COP Tj = 12°C	8.04	6.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	12.40 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	12.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.60 kW
Annual energy consumption Qhe	5939 kWh	8834 kWh

#### EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	10.00 kW	12.00 kW
SEER	4.71	7.59
Pdc Tj = 35°C	10.00 kW	12.00 kW
EER Tj = 35°C	2.95	4.09
Cdc Tj = 35 °C	0.900	0.900

Pdc Tj = 30°C	7.37 kW	8.84 kW
EER Tj = 30°C	4.11	6.34
Cdc Tj = 30 °C	0.900	0.900
Pdc Tj = 25°C	4.74 kW	6.00 kW
EER Tj = 25°C	5.57	8.49
Cdc Tj = 25 °C	0.900	0.900
Pdc Tj = 20°C	3.55 kW	4.90 kW
EER Tj = 20°C	5.74	12.40
Cdc Tj = 20 °C	0.900	0.900
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	1275 kWh	949 kWh



## Model 07. RAS-5WHRP2E + RWD-5RW3E-220S(-K) - Heating Only

Model name	07. RAS-5WHRP2E + RWD-5RW3E-220S(-K) - Heating Only
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

### General data

Power supply	3x400V 50Hz
Off-peak product	n/a

### Outdoor Air/Water

#### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	112 %
COP	2.73
Heating up time	1:08 h:min
Standby power input	43.0 W
Reference hot water temperature	52.0 °C
Mixed water at 40°C	273 l

#### EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

#### EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.48 kW	4.71 kW
COP	4.83	2.55

#### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	176 %	127 %
Prated	13.00 kW	14.00 kW

SCOP	4.48	3.26
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	12.40 kW
COP Tj = -7°C	2.91	2.09
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	7.55 kW
COP Tj = +2°C	4.35	3.10
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.50 kW	4.85 kW
COP Tj = +7°C	5.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.10 kW	4.23 kW
COP Tj = 12°C	8.04	6.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	12.40 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	12.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.60 kW
Annual energy consumption Qhe	5991 kWh	8886 kWh

## Model 08. RAS-5WHRP2E + RWD-5RW3E-220S(-K) - With Cooling Kit

Model name	08. RAS-5WHRP2E + RWD-5RW3E-220S(-K) - With Cooling Kit
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	112 %
COP	2.73
Heating up time	1:08 h:min
Standby power input	43.0 W
Reference hot water temperature	52.0 °C
Mixed water at 40°C	273 l

## EN 14511-4 | Heating

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	12.00 kW	12.00 kW
El input	2.48 kW	4.71 kW
COP	4.83	2.55

## EN 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	10.00 kW	12.00 kW
Cooling capacity	3.39	2.93
EER	2.95	4.10

## EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	178 %	128 %
Prated	13.00 kW	14.00 kW
SCOP	4.52	3.28
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.50 kW	12.40 kW
COP Tj = -7°C	2.91	2.09
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	7.00 kW	7.55 kW
COP Tj = +2°C	4.35	3.10
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	4.50 kW	4.85 kW
COP Tj = +7°C	5.82	4.34
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.10 kW	4.23 kW
COP Tj = 12°C	8.04	6.36
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	11.50 kW	12.40 kW
COP Tj = Tbiv	2.91	2.09
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	13.00 kW	12.40 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.59	1.86
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	1.60 kW
Annual energy consumption Qhe	5939 kWh	8834 kWh

#### EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	10.00 kW	12.00 kW
SEER	4.71	7.59
Pdc Tj = 35°C	10.00 kW	12.00 kW
EER Tj = 35°C	2.95	4.09
Cdc Tj = 35 °C	0.900	0.900

Pdc Tj = 30°C	7.37 kW	8.84 kW
EER Tj = 30°C	4.11	6.34
Cdc Tj = 30 °C	0.900	0.900
Pdc Tj = 25°C	4.74 kW	6.00 kW
EER Tj = 25°C	5.57	8.49
Cdc Tj = 25 °C	0.900	0.900
Pdc Tj = 20°C	3.55 kW	4.90 kW
EER Tj = 20°C	5.74	12.40
Cdc Tj = 20 °C	0.900	0.900
Poff	14 W	14 W
PTO	15 W	15 W
PSB	14 W	14 W
PCK	0 W	0 W
Annual energy consumption Qce	1275 kWh	949 kWh