Summary of	02. Yutaki S & S Combi 2.5HP	Reg. No.	041-K002-02
Certificate Holder			
Name	Johnson Controls-Hitachi AirConditioning Spain		
Address	Ronda Shimizu, 1. Pol. Ind. Can Torrella	Zip	08233
City	Vacarisses, Barcelona	Country	Spain
Certification Body	BRE Energy & Communications Division		
Name of testing laboratory	CEIS		
Subtype title	02. Yutaki S & S Combi 2.5HP		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R410a		
Mass Of Refrigerant	1.5 kg		

Model: RAS-2.5WHVNP RWM-2.5NE - Heating Only

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	177 %	130 %
Prated	6.00 kW	5.00 kW
SCOP	4.50	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2569 kWh	3114 kWh

Model: RAS-2.5WHVNP RWD-2.5NWE-200S - Heating Only

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	177 %	130 %
Prated	6.00 kW	5.00 kW
SCOP	4.50	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2569 kWh	3114 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147

Declared load profile	L
Efficiency ηDHW	132 %
COP	3.30
Heating up time	1:43 h:min
Standby power input	37.0 W
Reference hot water temperature	54.0 °C
Mixed water at 40°C	263 l

Model: RAS-2.5WHVNP RWD-2.5NWE-260S - Heating Only

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	177 %	130 %
Prated	6.00 kW	5.00 kW
SCOP	4.50	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2569 kWh	3114 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	136 %
COP	3.40
Heating up time	2:10 h:min
Standby power input	41.0 W
Reference hot water temperature	54.0 °C
Mixed water at 40°C	350 l

Model: RAS-2.5WHVNP RWD-2.5NWE-200S-K - UK- Heating Only

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	177 %	130 %
Prated	6.00 kW	5.00 kW
SCOP	4.50	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2569 kWh	3114 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147

Declared load profile	L
Efficiency ηDHW	132 %
COP	3.30
Heating up time	1:43 h:min
Standby power input	37.0 W
Reference hot water temperature	54.0 °C
Mixed water at 40°C	263 l

Model: RAS-2.5WHVNP RWD-2.5NWE-260S-K - UK- Heating Only

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	177 %	130 %
Prated	6.00 kW	5.00 kW
SCOP	4.50	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2569 kWh	3114 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	136 %
COP	3.40
Heating up time	2:10 h:min
Standby power input	41.0 W
Reference hot water temperature	54.0 °C
Mixed water at 40°C	350 l

Model: RAS-2.5WHVNP RWD-2.5NWSE-260S - Solar - Heating Only

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	177 %	130 %
Prated	6.00 kW	5.00 kW
SCOP	4.50	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2569 kWh	3114 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	136 %
COP	3.40
Heating up time	2:10 h:min
Standby power input	41.0 W
Reference hot water temperature	54.0 °C
Mixed water at 40°C	350 l

Model: RAS-2.5WHVNP RWM-2.5NE - with cooling kit

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	180 %	132 %
Prated	6.00 kW	5.00 kW
SCOP	4.58	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2525 kWh	3070 kWh

Model: RAS-2.5WHVNP RWD-2.5NWE-200S - with cooling kit

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	180 %	132 %
Prated	6.00 kW	5.00 kW
SCOP	4.58	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2525 kWh	3070 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	L
Efficiency ηDHW	132 %
COP	3.30
Heating up time	1:43 h:min
Standby power input	37.0 W
Reference hot water temperature	54.0 °C
Mixed water at 40°C	263 l

Model: RAS-2.5WHVNP RWD-2.5NWE-260S - with cooling kit

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	180 %	132 %
Prated	6.00 kW	5.00 kW
SCOP	4.58	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2525 kWh	3070 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147

Declared load profile	XL
Efficiency ηDHW	136 %
COP	3.40
Heating up time	2:10 h:min
Standby power input	41.0 W
Reference hot water temperature	54.0 °C
Mixed water at 40°C	350 l

Model: RAS-2.5WHVNP RWD-2.5NWSE-260S - Solar - with cooling kit

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	6.00 kW	6.00 kW
El input	1.25 kW	2.08 kW
COP	4.80	2.89
Indoor water flow rate	1.03 m³/h	0.64 m³/h

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	180 %	132 %
Prated	6.00 kW	5.00 kW
SCOP	4.58	3.38
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.95 kW	4.42 kW
COP Tj = -7°C	2.70	1.85
Pdh Tj = +2°C	3.01 kW	2.69 kW
COP Tj = +2°C	4.60	3.45
Pdh Tj = +7°C	1.90 kW	1.84 kW
COP Tj = +7°C	6.00	4.20
Pdh Tj = 12°C	1.80 kW	2.06 kW
COP Tj = 12°C	7.20	6.90
Pdh Tj = Tbiv	4.95 kW	4.42 kW

COP Tj = Tbiv	2.70	1.85
Pdh Tj = TOL	5.30 kW	3.90 kW
COP Tj = TOL	2.50	1.80
Cdh	0.90	0.90
WTOL	55 °C	55 °C
Poff	11 W	11 W
PTO	0 W	0 W
PSB	11 W	11 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.30 kW	1.10 kW
Annual energy consumption Qhe	2525 kWh	3070 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	136 %
COP	3.40
Heating up time	2:10 h:min
Standby power input	41.0 W
Reference hot water temperature	54.0 °C
Mixed water at 40°C	350 l