

TECHNICAL CATALOGUE

YUTAKI

R32 / R410A SERIES

MODELS

SPLIT SYSTEM

YUTAKI S: RWM-(2.0-10.0)(N/R)1E

YUTAKI S COMBI: RWD-(2.0-6.0)(N/R)W1E-220S(-K)

OUTDOOR UNITS: RAS-(2-3)WHVRP1 / RAS-(4-10)WH(V)NPE



Cooling & Heating

1.4 Product guide

1.4.1 Classification of the units

1.4.1.1 Split system - Outdoor unit

Unit type: Outdoor unit (Split air system)										
Position-separating hyphen (fixed)										
Compressor power (HP): 2, 2.5, 3, 4, 5, 6, 8, 10										
For water combination										
Heat pump										
V: Single phase unit (1~ 230V 50Hz) —: Three phase unit (3N~ 400V 50Hz)										
N: R410A refrigerant R: R32 refrigerant										
Premium series										
Serie 1										
Made in Europe										
RAS	-	X	W	H	(V)	(X)	P	(1)	(E)	

1.4.1.2 Split system - Indoor unit

◆ YUTAKI S

Unit type: YUTAKI S (Split system - Single water module (Indoor unit) - Medium/Low temperature)										
Position-separating hyphen (fixed)										
Compressor power of the combined outdoor unit (HP): 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 8.0, 10.0										
N: R410A refrigerant R: R32 refrigerant										
Serie 1										
Made in Europe										
RWM	-	X.X	(X)		1	E				

◆ YUTAKI S Combi

Unit type: YUTAKI S Combi (Split system - Dual water module (Indoor unit + Domestic hot water tank) - Medium/Low temperature)										
Position-separating hyphen (fixed)										
Compressor power of the combined outdoor unit (HP): 2.0, 2.5, 3.0, 4.0, 5.0, 6.0										
N: R410A refrigerant R: R32 refrigerant										
Water-to-water DHW heat exchanger										
Serie 1										
Made in Europe										
Position-separating hyphen (fixed)										
Tank model: 220 L										
Tank material: Stainless steel										
-K: Model for UK market										
RWD	-	X.X	(X)	W	1	E	-	220	S	(-K)

1.4.2 Product guide

1.4.2.1 Split system - Outdoor unit

1~ 230V 50Hz			
Unit	Code	Unit	Code
RAS-2WHVRP1	60289258	RAS-4WHVNPE	7E350007
RAS-2.5WHVRP1	60289259	RAS-5WHVNPE	7E350008
RAS-3WHVRP1	60289260	RAS-6WHVNPE	7E350009
			

3N~ 400V 50Hz	
Unit	Code
RAS-4WHNPE	7E350107
RAS-5WHNPE	7E350108
RAS-6WHNPE	7E350109
RAS-8WHNPE	7E350110
RAS-10WHNPE	7E350111
	

1.4.2.2 Split system - Indoor unit

◆ YUTAKI S



NOTE

Icons between brackets mean possible extra operations to the factory-supplied operations. For cooling operation, refer to the Cooling kit accessory for YUTAKI S units.

     			
1~ 230V 50Hz			
Unit	Code	Unit	Code
RWM-2.0R1E	7E475216	RWM-4.0N1E	7E475020
RWM-2.5R1E	7E475217	RWM-5.0N1E	7E475021
RWM-3.0R1E	7E475218	RWM-6.0N1E	7E475022
			

					
3N~ 400V 50Hz					
Unit	Code	Unit	Code	Unit	Code
RWM-2.0R1E	7E475216	RWM-4.0N1E	7E475020	RWM-8.0N1E	7E475023
RWM-2.5R1E	7E475217	RWM-5.0N1E	7E475021	RWM-10.0N1E	7E475024
RWM-3.0R1E	7E475218	RWM-6.0N1E	7E475022		
					

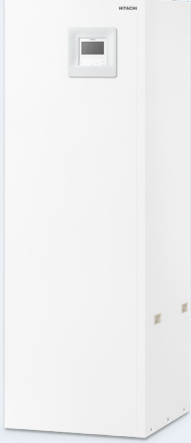
◆ YUTAKI S Combi



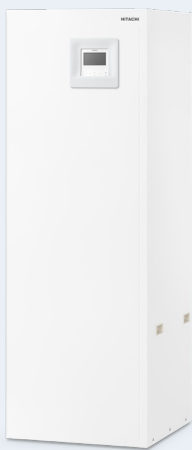
NOTE

Icons between brackets mean possible extra operations to the factory-supplied operations. For cooling operation, refer to the Cooling kit accessory for YUTAKI S Combi units.

Standard model

	
1~ 230V 50Hz 3N~ 400V 50Hz	
Unit	Code
RWD-2.0RW1E-220S	7E483503
RWD-2.5RW1E-220S	7E483504
RWD-3.0RW1E-220S	7E483505
RWD-4.0NW1E-220S	7E483507
RWD-5.0NW1E-220S	7E483508
RWD-6.0NW1E-220S	7E483509
	

Model for UK market

	
1~ 230V 50Hz 3N~ 400V 50Hz	
Unit	Code
RWD-2.0RW1E-220S-K	7E483516
RWD-2.5RW1E-220S-K	7E483517
RWD-3.0RW1E-220S-K	7E483518
RWD-4.0NW1E-220S-K	7E483520
RWD-5.0NW1E-220S-K	7E483521
RWD-6.0NW1E-220S-K	7E483522
	

1.4.3 Accessory code list

Model	Reference
For YUTAKI S units (RWM-(2.0-10.0)(N/R)1E)	S
For YUTAKI S Combi units (RWD-(2.0-6.0)(N/R)W1E-220S(-K))	SC

◆ Cooling kit accessories

Accessory	Ref.	Name	Code	Figure
ATW-CKS-01	S	Cooling operation kit for YUTAKI S (For 2.0-3.0HP)	7E549927	
ATW-CKS-02	S	Cooling operation kit for YUTAKI S (For 4.0-6.0HP)	7E549928	
ATW-CKS-03	S	Cooling operation kit for YUTAKI S (For 8.0-10.0HP)	7E549929	
 ATW-CKSC-02	SC	Cooling operation kit for YUTAKI S Combi - Insulations + Jumper	7E549959	

2.1 Capacity tables

2.1.1 Nominal capacity-performance tables

2.1.1.1 Considerations

- The heating capacity tables show the capacity and performance data in integrated values (with defrost correction factor included).
- The nominal heating and cooling capacities are based on the EN 14511 standard: Piping length: 7.5 meters; Piping lift: 0 meters.

Keywords:

- CAP: Nominal capacity (kW)
- COP: Coefficient of performance
- EER: Energy efficiency ratio
- DB: Dry bulb; WB: Wet bulb (°C)
- OAT: Outdoor ambient temperature (°C)
- WIT: Water inlet temperature (°C)
- WOT: Water outlet temperature (°C)

2.1.1.2 Capacity-performance data

◆ YUTAKI S

HP				2.0 HP	2.5 HP	3.0 HP
Outdoor unit model				RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
Indoor unit model				RWM-2.0R1E	RWM-2.5R1E	RWM-3.0R1E
OAT (DB/WB)	WIT / WOT	-	Unit	Heating operation		
7 / 6 °C	30 / 35 °C	CAP (Min./Nom./Max.)	kW	1.85 / 4.30 / 6.50	1.8 / 6.00 / 8.6	2.1 / 8.00 / 11.0
		COP (Nom.)	-	5.25	4.80	4.60
	47 / 55 °C	CAP (Nom./Max.)	kW	4.30 / 6.00	6.00 / 7.00	8.00 / 9.00
		COP (Nom.)	-	3.00	2.85	2.80
2 / 1 °C	* / 35 °C	CAP (Nom.)	kW	3.50	4.50	5.50
		COP (Nom.)	-	4.00	3.65	3.53
-7 / -8 °C	30 / 35 °C	CAP (Nom./Max.)	kW	4.50 / 5.30	5.30 / 6.20	5.80 / 7.50
		COP (Nom.)	-	2.8	2.70	2.70
	47 / 55 °C	CAP (Nom./Max.)	kW	4.00 / 4.20	4.7 / 5.00	5.00 / 5.50
		COP (Nom.)	-	2.00	1.80	1.75

OAT (DB/WB)	WIT / WOT	-	Unit	Cooling operation (Using cooling kit accessory)		
35 / -- °C	12 / 7 °C	CAP (Nom./Max.)	kW	4.00 / 5.00	5.30 / 6.00	6.50 / 7.00
		EER (Nom.)	-	4.00	3.60	3.35
	23 / 18 °C	CAP (Nom./Max.)	kW	5.50 / 6.40	6.30 / 7.20	7.00 / 9.00
		EER (Nom.)	-	5.40	5.30	4.80

HP				4.0 HP	5.0 HP	6.0 HP	8.0 HP	10.0 HP
Outdoor unit model				RAS-4WH(V) NPE	RAS-5WH(V) NPE	RAS-6WH(V) NPE	RAS-8WHNPE	RAS-10WHNPE
Indoor unit model				RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E	RWM-8.0N1E	RWM-10.0N1E
OAT (DB/WB)	WIT / WOT	-	Unit	Heating operation				
7 / 6 °C	30 / 35 °C	CAP (Min./Nom./Max.)	kW	4.3 / 11.0 / 15.2	4.8 / 14.0 / 16.7	5.5 / 16.0 / 17.8	9.0 / 20.0 / 25.5	10.0 / 24.0 / 32.0
		COP (Nom.)	-	5.00	4.71	4.57	4.30	4.29
	47 / 55 °C	CAP (Nom./Max.)	kW	11.0 / 13.5	14.0 / 15.2	16.0 / 17.0	20.0 / 24.0	24.0 / 25.5
		COP (Nom.)	-	3.00	2.80	2.50	2.72	2.65
2 / 1 °C	* / 35 °C	CAP (Nom.)	kW	9.50	10.5	11.1	12.3	13.0
		COP (Nom.)	-	3.61	3.55	3.41	3.41	3.31
-7 / -8 °C	30 / 35 °C	CAP (Nom./Max.)	kW	9.7 / 10.6	11.5 / 12.0	12.0 / 13.0	14.2 / 17.9	16.5 / 21.0
		COP (Nom.)	-	2.74	2.65	2.57	2.57	2.46
	47 / 55 °C	CAP (Nom./Max.)	kW	8.7 / 9.7	9.7 / 11.2	10.5 / 12.0	12.5 / 14.5	15.5 / 17.3
		COP (Nom.)	-	1.78	1.85	1.75	1.70	1.50

OAT (DB/WB)	WIT / WOT	-	Unit	Cooling operation (Using cooling kit accessory)				
35 / -- °C	12 / 7 °C	CAP (Nom./Max.)	kW	7.2 / 11.8	9.5 / 12.6	10.5 / 13.7	14.0 / 16.4	17.5 / 20.6
		EER (Nom.)	-	3.54	3.40	3.23	3.12	2.81
	23 / 18 °C	CAP (Nom./Max.)	kW	10.4 / 15.0	12.9 / 16.0	13.5 / 17.5	17.0 / 23.5	20.0 / 27.0
		EER (Nom.)	-	4.50	4.48	4.23	3.81	3.61



NOTE

*: The test is performed with the fixed flow rate or with the ΔT obtained during the test at the corresponding standard rating conditions for units with variable flow rate.

◆ YUTAKI S Combi

HP				2.0 HP	2.5 HP	3.0 HP
Outdoor unit model				RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
Indoor unit model				RWD-2.0RW1E-220S(-K)	RWD-2.5RW1E-220S(-K)	RWD-3.0RW1E-220S(-K)
OAT (DB/WB)	WIT / WOT	-	Unit	Heating operation		
7 / 6 °C	30 / 35 °C	CAP (Min./Nom./Max.)	kW	1.85 / 4.30 / 6.50	1.8 / 6.00 / 8.60	2.1 / 8.00 / 11.0
		COP (Nom.)	-	5.25	4.80	4.60
	47 / 55 °C	CAP (Nom./Max.)	kW	4.30 / 6.00	6.00 / 7.00	8.00 / 9.00
		COP (Nom.)	-	3.00	2.85	2.80
2 / 1 °C	* / 35 °C	CAP (Nom.)	kW	3.50	4.50	5.50
		COP (Nom.)	-	4.00	3.65	3.53
-7 / -8 °C	30 / 35 °C	CAP (Nom./Max.)	kW	4.50 / 5.30	5.30 / 6.20	5.80 / 7.50
		COP (Nom.)	-	2.8	2.70	2.70
	47 / 55 °C	CAP (Nom./Max.)	kW	4.00 / 4.20	4.7 / 5.00	5.00 / 5.50
		COP (Nom.)	-	2.00	1.80	1.75

OAT (DB/WB)	WIT / WOT	-	Unit	Cooling operation (Using cooling kit accessory)		
35 / -- °C	12 / 7 °C	CAP (Nom./Max.)	kW	4.00 / 5.00	5.30 / 6.00	6.50 / 7.00
		EER (Nom.)	-	4.00	3.60	3.35
	23 / 18 °C	CAP (Nom./Max.)	kW	5.50 / 6.40	6.30 / 7.20	7.00 / 9.00
		EER (Nom.)	-	5.40	5.30	4.80

HP				4.0 HP	5.0 HP	6.0 HP
Outdoor unit model				RAS-4WH(V)NPE	RAS-5WH(V)NPE	RAS-6WH(V)NPE
Indoor unit model				RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
OAT (DB/WB)	WIT / WOT	-	Unit	Heating operation		
7 / 6 °C	30 / 35 °C	CAP (Min./Nom./Max.)	kW	4.3 / 11.0 / 15.2	4.8 / 14.0 / 16.7	5.5 / 16.0 / 17.8
		COP (Nom.)	-	5.00	4.71	4.57
	47 / 55 °C	CAP (Nom./Max.)	kW	11.0 / 13.5	14.0 / 15.2	16.0 / 17.0
		COP (Nom.)	-	3.00	2.80	2.50
2 / 1 °C	* / 35 °C	CAP (Nom.)	kW	9.50	10.5	11.1
		COP (Nom.)	-	3.61	3.55	3.41
-7 / -8 °C	30 / 35 °C	CAP (Nom./Max.)	kW	9.7 / 10.6	11.5 / 12.0	12.0 / 13.0
		COP (Nom.)	-	2.74	2.65	2.57
	47 / 55 °C	CAP (Nom./Max.)	kW	8.7 / 9.7	9.7 / 11.2	10.5 / 12.0
		COP (Nom.)	-	1.78	1.85	1.75

OAT (DB/WB)	WIT / WOT	-	Unit	Cooling operation (Using cooling kit accessory)		
35 / -- °C	12 / 7 °C	CAP (Nom./Max.)	kW	7.2 / 11.8	9.5 / 12.6	10.5 / 13.7
		EER (Nom.)	-	3.54	3.40	3.23
	23 / 18 °C	CAP (Nom./Max.)	kW	10.4 / 15.0	12.9 / 16.0	13.5 / 17.5
		EER (Nom.)	-	4.50	4.48	4.23

**NOTE**

*: The test is performed with the fixed flow rate or with the ΔT obtained during the test at the corresponding standard rating conditions for units with variable flow rate.

◆ YUTAKI S Combi Domestic Hot Water tank performance

HP				(2.0-3.0) HP	(4.0-6.0) HP
Tank	Outdoor unit model			RAS-(2-3)WHVRP1	RAS-(4-6)WH(V)NPE
	Indoor unit model			RWD-(2.0-3.0)RW1E-220S(-K)	RWD-(4.0-6.0)NW1E-220S(-K)
220 L	Load profile	-	-	L	L
	COP _{dhw}	-	-	3.2	3.1
	Heating up time	t _h	h:min	1:55	1:05
	Standby power input	P _{es}	W	30	34
	Mixed water at 40 °C	V _{max}	L	288	288
	Ref hot water temperature	θ'wh	°C	52.55	52.55
	Efficiency	ηwh	%	130	127
	Energy class	-	-	A+	A+

2.2 ERP performance data

2.2.1 General considerations

- This appliance must be installed, maintained and dismantled by professionals. Do not pour contained refrigerant into the atmosphere since this refrigerant fluid is a fluorinated greenhouse gas regulated under European Regulation (EU) No. 517/2014.
- Data between brackets corresponds only to heating and cooling models ("Cooling kit" accessory needed).
- Data with the mark (*) corresponds to the "Energy efficiency contribution (η_s)" due to the use of temperature control.

OTC control (Factory-supplied)		Wired room thermostat (PC-ARFH2E)	7E543016
		Wireless room thermostat (ATW-RTU-04)	7E543003
		Wired room sensor (ATW-ITS-01)	7E549932
Temperature control class	II	Temperature control class	VI
Energy efficiency contribution	+2%	Contribution to the nominal energy efficiency	+4%

2.2.2 General ERP data for space heaters

2.2.2.1 ERP data - YUTAKI S

◆ AVERAGE climate

RAS-(2-3)WHVRP1 + RWM-(2.0-3.0)R1E

Model			HP	2.0 HP		2.5 HP		3.0 HP	
			Outdoor unit	RAS-2WHVRP1		RAS-2.5WHVRP1		RAS-3WHVRP1	
			Indoor unit	RWM-2.0R1E		RWM-2.5R1E		RWM-3.0R1E	
Water outlet temperature			35°C	55°C	35°C	55°C	35°C	55°C	
Product description	Air to water heat pump	-	Yes						
	Heat pump combination heater	-	No						
	Low temperature heat pump	-	No						
	Complementary heater	-	Yes						
Design capacity (P _{DESIGN})		kW	4.0	4.0	6.0	5.0	7.0	6.0	
Nominal energy efficiency (η _s)		%	180 (184)	130 (132)	177 (180)	127 (128)	177 (179)	125 (126)	
Nominal energy class		-	A+++	A++	A+++	A++	A+++	A++	
Data for Packaged Fiche:									
Energy efficiency with OTC control (η _s) (*)		%	182 (186)	132 (134)	179 (182)	129 (130)	179 (181)	127 (129)	
Energy class with OTC control		-	A+++	A++	A+++	A++	A+++	A++	
Energy efficiency with thermostats/sensors (η _s) (*)		%	183 (187)	133 (135)	181 (184)	131 (132)	181 (183)	129 (131)	
Energy class with thermostats		-	A+++	A++	A+++	A++	A+++	A++	
Supplementary capacity (P _{SUP})		kW	0.0	0.9	0.7	1.1	1.4	1.0	
Type of energy used		-	Electricity						
Declared capacity (P _{dh}) and coefficient of performance (COP _d) at partial load under the following outdoor temperatures:									
Outdoor temperature (T _j) = -7°C	P _{dh}	kW	3.54	3.50	5.10	4.42	5.90	5.10	
	COP _d	-	3.20	2.00	2.70	1.65	2.65	1.84	
Outdoor temperature (T _j) = +2°C	P _{dh}	kW	2.35	2.16	3.10	2.69	3.59	3.10	
	COP _d	-	4.43	3.25	4.60	3.30	4.30	3.10	
Outdoor temperature (T _j) = +7°C	P _{dh}	kW	3.00	2.43	3.00	2.43	3.20	2.00	
	COP _d	-	7.41	5.20	6.20	4.95	7.00	4.65	
Outdoor temperature (T _j) = +12°C	P _{dh}	kW	3.05	2.80	3.05	2.80	3.50	2.20	
	COP _d	-	9.24	6.90	8.35	6.78	9.70	6.55	
Outdoor temperature (T _j) = Bivalent temperature (T _{biv})	P _{dh}	kW	3.54	3.50	5.10	4.42	5.90	5.10	
	COP _d	-	3.20	2.00	2.70	1.65	2.65	1.84	
Outdoor temperature (T _j) = Limit operation temperature (TOL)	P _{dh}	kW	4.00	3.10	5.30	3.90	5.60	5.00	
	COP _d	-	2.75	1.90	2.50	1.70	2.30	1.50	
Bivalent temperature (T _{biv})		°C	-7	-7	-7	-7	-7	-7	
Limit operation temperature (TOL)		°C	-10	-10	-10	-10	-10	-10	
Water limit operation temperature (WTOL)		°C	55	55	55	55	55	55	
Degradation coefficient (C _{dh})		-	0.9	0.9	0.9	0.9	0.9	0.9	
Annual energy consumption (Q _{HE})		kW·h	1811 (1767)	2463 (2420)	2652 (2608)	3186 (3143)	3068 (3024)	3723 (3680)	

RAS-(4-6)WHVNPE + RWM-(4.0-6.0)N1E

Model			HP		4.0 HP		5.0 HP		6.0 HP	
			Outdoor unit		RAS-4WHVNPE		RAS-5WHVNPE		RAS-6WHVNPE	
			Indoor unit		RWM-4.0N1E		RWM-5.0N1E		RWM-6.0N1E	
Water outlet temperature				35°C	55°C	35°C	55°C	35°C	55°C	
Product description	Air to water heat pump		-	Yes						
	Heat pump combination heater		-	No						
	Low temperature heat pump		-	No						
	Complementary heater		-	Yes						
Design capacity (P _{DESIGN})			kW	11.0	10.0	14.0	12.0	16.0	14.0	
Nominal energy efficiency (η _s)			%	181 (183)	135 (136)	183 (185)	133 (133)	162 (163)	134 (135)	
Nominal energy class			-	A+++	A++	A+++	A++	A++	A++	
Data for Packaged Fiche:										
Energy efficiency with OTC control (η _s) (*)			%	183 (185)	137 (138)	185 (187)	135 (135)	164 (165)	136 (137)	
Energy class with OTC control			-	A+++	A++	A+++	A++	A++	A++	
Energy efficiency with thermostats/sensors (η _s) (*)			%	184 (186)	138 (139)	186 (188)	136 (136)	165 (166)	137 (138)	
Energy class with thermostats			-	A+++	A++	A+++	A++	A++	A++	
Supplementary capacity (P _{SUP})			kW	0.5	2.6	1.9	3.0	1.9	3.5	
Type of energy used			-	Electricity						
Declared capacity (P _{dh}) and coefficient of performance (COP _d) at partial load under the following outdoor temperatures:										
Outdoor temperature (T _j) = -7°C	P _{dh}	kW	9.45	8.60	12.00	10.25	13.80	11.20		
	COP _d	-	3.05	1.80	2.55	1.70	2.40	1.94		
Outdoor temperature (T _j) = +2°C	P _{dh}	kW	5.75	5.23	7.30	6.24	8.40	6.82		
	COP _d	-	4.50	3.60	4.70	3.60	3.90	3.35		
Outdoor temperature (T _j) = +7°C	P _{dh}	kW	3.70	3.52	4.70	4.01	5.40	4.38		
	COP _d	-	6.00	4.80	6.54	4.60	6.16	4.80		
Outdoor temperature (T _j) = +12°C	P _{dh}	kW	3.70	3.60	3.50	3.50	3.50	3.60		
	COP _d	-	7.50	5.80	7.55	5.50	7.10	7.05		
Outdoor temperature (T _j) = Bivalent temperature (T _{biv})	P _{dh}	kW	9.45	8.60	12.00	10.25	13.80	11.20		
	COP _d	-	3.05	1.80	2.55	1.70	2.40	1.94		
Outdoor temperature (T _j) = Limit operation temperature (TOL)	P _{dh}	kW	10.50	7.40	12.10	9.00	14.10	10.5		
	COP _d	-	2.65	1.70	2.50	1.60	2.30	1.40		
Bivalent temperature (T _{biv})			°C	-7	-7	-7	-7	-7	-7	
Limit operation temperature (TOL)			°C	-10	-10	-10	-10	-10	-10	
Water limit operation temperature (WTOL)			°C	55	55	55	55	55	55	
Degradation coefficient (C _{dh})			-	0.9	0.9	0.9	0.9	0.9	0.9	
Annual energy consumption (Q _{HE})			kW·h	4801 (4753)	5815 (5767)	6022 (5974)	7066 (7018)	7822 (7774)	7640 (7592)	

RAS-(4-6)WHNPE + RWM-(4.0-6.0)N1E

Model			HP	4.0 HP		5.0 HP		6.0 HP	
			Outdoor unit	RAS-4WHNPE		RAS-5WHNPE		RAS-6WHNPE	
			Indoor unit	RWM-4.0N1E		RWM-5.0N1E		RWM-6.0N1E	
Water outlet temperature			35°C	55°C	35°C	55°C	35°C	55°C	
Product description	Air to water heat pump	-	Yes						
	Heat pump combination heater	-	No						
	Low temperature heat pump	-	No						
	Complementary heater	-	Yes						
Design capacity (P _{DESIGN})		kW	11.0	10.0	14.0	12.0	16.0	14.0	
Nominal energy efficiency (η _s)		%	180 (183)	135 (136)	182 (185)	132 (133)	161 (163)	134 (135)	
Nominal energy class		-	A+++	A++	A+++	A++	A++	A++	
Data for Packaged Fiche:									
Energy efficiency with OTC control (η _s) (*)		%	182 (185)	137 (139)	184 (187)	134 (135)	163 (165)	136 (137)	
Energy class with OTC control		-	A+++	A++	A+++	A++	A++	A++	
Energy efficiency with thermostats/sensors (η _s) (*)		%	183 (186)	138 (140)	185 (188)	135 (136)	164 (166)	137 (138)	
Energy class with thermostats		-	A+++	A++	A+++	A++	A++	A++	
Supplementary capacity (P _{SUP})		kW	0.5	2.6	1.9	3.0	1.9	3.5	
Type of energy used		-	Electricity						
Declared capacity (P _{dh}) and coefficient of performance (COP _d) at partial load under the following outdoor temperatures:									
Outdoor temperature (T _j) = -7°C	P _{dh}	kW	9.45	8.60	12.00	10.25	13.80	11.20	
	COP _d	-	3.05	1.80	2.55	1.70	2.40	1.94	
Outdoor temperature (T _j) = +2°C	P _{dh}	kW	5.75	5.23	7.30	6.24	8.40	6.82	
	COP _d	-	4.50	3.60	4.70	3.60	3.90	3.35	
Outdoor temperature (T _j) = +7°C	P _{dh}	kW	3.70	3.52	4.70	4.01	5.40	4.38	
	COP _d	-	6.00	4.80	6.54	4.60	6.16	4.80	
Outdoor temperature (T _j) = +12°C	P _{dh}	kW	3.70	3.60	3.50	3.50	3.50	3.60	
	COP _d	-	7.50	5.80	7.55	5.50	7.10	7.05	
Outdoor temperature (T _j) = Bivalent temperature (T _{biv})	P _{dh}	kW	9.45	8.60	12.00	10.25	13.80	11.20	
	COP _d	-	3.05	1.80	2.55	1.70	2.40	1.94	
Outdoor temperature (T _j) = Limit operation temperature (TOL)	P _{dh}	kW	10.50	7.40	12.10	9.00	14.10	10.50	
	COP _d	-	2.65	1.70	2.50	1.60	2.30	1.40	
Bivalent temperature (T _{biv})		°C	-7	-7	-7	-7	-7	-7	
Limit operation temperature (TOL)		°C	-10	-10	-10	-10	-10	-10	
Water limit operation temperature (WTOL)		°C	55	55	55	55	55	55	
Degradation coefficient (C _{dh})		-	0.9	0.9	0.9	0.9	0.9	0.9	
Annual energy consumption (Q _{HE})		kW·h	4823 (4753)	5837 (5767)	6044 (5974)	7088 (7018)	7844 (7774)	7662 (7592)	

RAS-(8-10)WHNPE + RWM-(8.0-10.0)N1E

Model			HP	8.0 HP		10 HP	
			Outdoor unit	RAS-8WHNPE		RAS-10WHNPE	
			Indoor unit	RWM-8.0N1E		RWM-10.0N1E	
Water outlet temperature			35°C	55°C	35°C	55°C	
Product description	Air to water heat pump	-	Yes				
	Heat pump combination heater	-	No				
	Low temperature heat pump	-	No				
	Complementary heater	-	Yes				
Design capacity (P _{DESIGN})		kW	18.0	16.0	20.0	18.0	
Nominal energy efficiency (η _s)		%	150 (152)	120 (122)	141 (142)	116 (118)	
Nominal energy class		-	A++	A+	A+	A+	
Data for Packaged Fiche:							
	Energy efficiency with OTC control (η _s) (*)	%	152 (154)	122 (124)	143 (144)	118 (120)	
	Energy class with OTC control	-	A++	A+	A+	A+	
	Energy efficiency with thermostats/sensors (η _s) (*)	%	153 (155)	123 (125)	144 (145)	119 (121)	
	Energy class with thermostats	-	A++	A+ (A++)	A+	A+	
Supplementary capacity (P _{SUP})		kW	2.0	3.9	2.0	4.0	
Type of energy used		-	Electricity				
Declared capacity (P _{dh}) and coefficient of performance (COP _d) at partial load under the following outdoor temperatures:							
	Outdoor temperature (T _j) = -7°C	P _{dh}	kW	15.60	13.80	17.40	15.60
		COP _d	-	2.50	1.65	2.30	1.65
	Outdoor temperature (T _j) = +2°C	P _{dh}	kW	9.50	8.40	10.77	9.50
		COP _d	-	3.85	3.10	3.60	3.10
	Outdoor temperature (T _j) = +7°C	P _{dh}	kW	6.10	6.00	8.70	8.30
		COP _d	-	5.40	4.76	5.10	4.35
	Outdoor temperature (T _j) = +12°C	P _{dh}	kW	7.00	6.80	8.70	8.50
		COP _d	-	4.65	5.10	4.90	4.60
	Outdoor temperature (T _j) = Bivalent temperature (T _{biv})	P _{dh}	kW	15.60	13.80	17.40	15.60
		COP _d	-	2.50	1.65	2.30	1.65
	Outdoor temperature (T _j) = Limit operation temperature (TOL)	P _{dh}	kW	16.00	12.10	18.00	14.00
		COP _d	-	2.40	1.50	2.10	1.45
	Bivalent temperature (T _{biv})		°C	-7	-7	-7	-7
	Limit operation temperature (TOL)		°C	-10	-10	-10	-10
	Water limit operation temperature (WTOL)		°C	55	55	55	55
	Degradation coefficient (C _{dh})		-	0.9	0.9	0.9	0.9
Annual energy consumption (Q _{HE})		kW·h	9513 (9382)	10452 (10320)	11410 (11278)	12210 (12078)	

◆ **WARMER climate**

RAS-(2-3)WHVRP1 + RWM-(2.0-3.0)R1E

Model	HP		2.0 HP	2.5 HP	3.0 HP
	Outdoor unit		RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
	Indoor unit		RWM-2.0R1E	RWM-2.5R1E	RWM-3.0R1E
Design capacity (P _{DESIGN})		kW	4.0	5.0	6.0
⁽¹⁾ Nominal energy efficiency (η _s)		%	185 (194)	182 (189)	170 (175)
Data for Packaged Fiche:					
	⁽²⁾ Energy efficiency with OTC control (η _s) (*)	%	187 (196)	184 (191)	172 (177)
	⁽³⁾ Energy efficiency with thermostats (η _s) (*)	%	188 (197)	185 (192)	173 (178)
Annual energy consumption (Q _{UE})		kW·h	1137 (1084)	1441 (1389)	1857 (1804)

RAS-(4-6)WH(V)NPE + RWM-(4.0-6.0)N1E

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHVNPE	RAS-5WHVNPE	RAS-6WHVNPE
	Indoor unit		RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E
Design capacity (P _{DESIGN})		kW	10	12	14
⁽¹⁾ Nominal energy efficiency (η _s)		%	193 (198)	183 (186)	177 (180)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η _s) (*)		%	195 (200)	185 (188)	179 (182)
⁽³⁾ Energy efficiency with thermostats (η _s) (*)		%	196 (201)	186 (189)	180 (183)
Annual energy consumption (Q _{HE})		kW·h	2722 (2664)	3455 (3397)	4149 (4091)

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHNPE	RAS-5WHNPE	RAS-6WHNPE
	Indoor unit		RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E
Design capacity (P _{DESIGN})		kW	10	12	14
⁽¹⁾ Nominal energy efficiency (η _s)		%	191 (198)	181 (186)	176 (180)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η _s) (*)		%	193 (200)	183 (188)	178 (182)
⁽³⁾ Energy efficiency with thermostats (η _s) (*)		%	194 (201)	184 (189)	179 (183)
Annual energy consumption (Q _{HE})		kW·h	2748 (2664)	3481 (3397)	4175 (4091)

RAS-(8-10)WHNPE + RWM-(8.0-10.0)N1E

Model	HP		8.0 HP	10.0 HP
	Outdoor unit		RAS-8WHNPE	RAS-10WHNPE
	Indoor unit		RWM-8.0N1E	RWM-10.0N1E
Design capacity (P _{DESIGN})		kW	16	18
⁽¹⁾ Nominal energy efficiency (η _s)		%	178 (181)	173 (178)
Data for Packaged Fiche:				
⁽²⁾ Energy efficiency with OTC control (η _s) (*)		%	180 (183)	175 (180)
⁽³⁾ Energy efficiency with thermostats (η _s) (*)		%	181 (184)	176 (181)
Annual energy consumption (Q _{HE})		kW·h	4725 (4641)	5466 (5307)

◆ **COLDER climate**

RAS-(2-3)WHVRP1 + RWM-(2.0-3.0)R1E

Model	HP		2.0 HP	2.5 HP	3.0 HP
	Outdoor unit		RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
	Indoor unit		RWM-2.0R1E	RWM-2.5R1E	RWM-3.0R1E
Design capacity (P_{DESIGN})		kW	4.0	5.0	6.0
⁽¹⁾ Nominal energy efficiency (η_s)		%	123 (125)	122 (123)	118 (118)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η_s) (*)		%	125 (127)	124 (125)	120 (120)
⁽³⁾ Energy efficiency with thermostats (η_s) (*)		%	126 (128)	125 (126)	121 (121)
Annual energy consumption (Q_{HE})		kW·h	3058 (3031)	4048 (4022)	4910 (4884)

RAS-(4-6)WH(V)NPE + RWM-(4.0-6.0)N1E

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHVNPE	RAS-5WHVNPE	RAS-6WHVNPE
	Indoor unit		RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E
Design capacity (P_{DESIGN})		kW	11	12	14
⁽¹⁾ Nominal energy efficiency (η_s)		%	120 (121)	119 (119)	112 (113)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η_s) (*)		%	122 (123)	121 (121)	114 (115)
⁽³⁾ Energy efficiency with thermostats (η_s) (*)		%	123 (124)	122 (122)	115 (116)
Annual energy consumption (Q_{HE})		kW·h	8641 (8612)	9514 (9485)	11620 (11591)

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHNPE	RAS-5WHNPE	RAS-6WHNPE
	Indoor unit		RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E
Design capacity (P_{DESIGN})		kW	11	12	14
⁽¹⁾ Nominal energy efficiency (η_s)		%	120 (121)	119 (119)	112 (113)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η_s) (*)		%	122 (123)	121 (121)	114 (115)
⁽³⁾ Energy efficiency with thermostats (η_s) (*)		%	123 (124)	122 (122)	115 (116)
Annual energy consumption (Q_{HE})		kW·h	8654 (8612)	9528 (9485)	11633 (11591)

RAS-(8-10)WHNPE + RWM-(8.0-10.0)N1E

Model	HP		8.0 HP	10.0 HP
	Outdoor unit		RAS-8WHNPE	RAS-10WHNPE
	Indoor unit		RWM-8.0N1E	RWM-10.0N1E
Design capacity (P_{DESIGN})		kW	16	18
⁽¹⁾ Nominal energy efficiency (η_s)		%	109 (110)	107 (107)
Data for Packaged Fiche:				
⁽²⁾ Energy efficiency with OTC control (η_s) (*)		%	111 (113)	109 (109)
⁽³⁾ Energy efficiency with thermostats (η_s) (*)		%	112 (114)	110 (110)
Annual energy consumption (Q_{HE})		kW·h	13987 (13945)	15956 (15876)

2.2.2.2 ERP data - YUTAKI S Combi

◆ AVERAGE climate

RAS-(2-3)WHVRP1 + RWD-(2.0-3.0)RW1E-220S(-K)

Model			HP	2.0 HP		2.5 HP		3.0 HP	
			Outdoor unit	RAS-2WHVRP1		RAS-2.5WHVRP1		RAS-3WHVRP1	
			Indoor unit	RWD-2.0RW1E-220S(-K)		RWD-2.5RW1E-220S(-K)		RWD-3.0RW1E-220S(-K)	
Water outlet temperature			35°C	55°C	35°C	55°C	35°C	55°C	
Product description	Air to water heat pump	-	Yes						
	Heat pump combination heater	-	No						
	Low temperature heat pump	-	No						
	Complementary heater	-	Yes						
Design capacity (P _{DESIGN})		kW	4.0	4.0	6.0	5.0	7.0	6.0	
Nominal energy efficiency (η _s)		%	180 (184)	130 (132)	177 (180)	127 (128)	177 (179)	125 (126)	
Nominal energy class		-	A+++	A++	A+++	A++	A+++	A++	
Data for Packaged Fiche:									
	Energy efficiency with OTC control (η _s) (*)	%	182 (186)	132 (134)	179 (182)	129 (130)	179 (181)	127 (129)	
	Energy class with OTC control	-	A+++	A++	A+++	A++	A+++	A++	
	Energy efficiency with thermostats/sensors (η _s) (*)	%	183 (187)	133 (135)	181 (184)	131 (132)	181 (183)	129 (131)	
	Energy class with thermostats	-	A+++	A++	A+++	A++	A+++	A++	
Supplementary capacity (P _{SUP})		kW	0.0	0.9	0.7	1.1	1.4	1.0	
Type of energy used		-	Electricity						
Declared capacity (P _{dh}) and coefficient of performance (COP _d) at partial load under the following outdoor temperatures:									
Outdoor temperature (T _j) = -7°C	P _{dh}	kW	3.54	3.50	5.10	4.42	5.90	5.10	
	COP _d	-	3.20	2.00	2.70	1.65	2.65	1.84	
Outdoor temperature (T _j) = +2°C	P _{dh}	kW	2.35	2.16	3.10	2.69	3.59	3.10	
	COP _d	-	4.43	3.25	4.60	3.30	4.30	3.10	
Outdoor temperature (T _j) = +7°C	P _{dh}	kW	3.00	2.43	3.00	2.43	3.20	2.00	
	COP _d	-	7.41	5.20	6.20	4.95	7.00	4.65	
Outdoor temperature (T _j) = +12°C	P _{dh}	kW	3.05	2.80	3.05	2.80	3.50	2.20	
	COP _d	-	9.24	6.90	8.35	6.78	9.70	6.55	
Outdoor temperature (T _j) = Bivalent temperature (T _{biv})	P _{dh}	kW	3.54	3.50	5.10	4.42	5.90	5.10	
	COP _d	-	3.20	2.00	2.70	1.65	2.65	1.84	
Outdoor temperature (T _j) = Limit operation temperature (TOL)	P _{dh}	kW	4.00	3.10	5.30	3.90	5.60	5.00	
	COP _d	-	2.75	1.90	2.50	1.70	2.30	1.50	
Bivalent temperature (T _{biv})		°C	-7	-7	-7	-7	-7	-7	
Limit operation temperature (TOL)		°C	-10	-10	-10	-10	-10	-10	
Water limit operation temperature (WTOL)		°C	55	55	55	55	55	55	
Degradation coefficient (C _{dh})		-	0.9	0.9	0.9	0.9	0.9	0.9	
Annual energy consumption (Q _{HE})		kW·h	1811 (1767)	2463 (2420)	2652 (2608)	3186 (3143)	3068 (3024)	3723 (3680)	

RAS-(4-6)WHVNPE + RWD-(4.0-6.0)NW1E-220S(-K)

Model		HP	4.0 HP		5.0 HP		6.0 HP	
		Outdoor unit	RAS-4WHVNPE		RAS-5WHVNPE		RAS-6WHVNPE	
		Indoor unit	RWD-4.0NW1E-220S(-K)		RWD-5.0NW1E-220S(-K)		RWD-6.0NW1E-220S(-K)	
Water outlet temperature			35°C	55°C	35°C	55°C	35°C	55°C
Product description	Air to water heat pump	-	Yes					
	Heat pump combination heater	-	No					
	Low temperature heat pump	-	No					
	Complementary heater	-	Yes					
Design capacity (P _{DESIGN})		kW	11.0	10.0	14.0	12.0	16.0	14.0
Nominal energy efficiency (η _s)		%	181 (183)	135 (136)	183 (185)	133 (133)	162 (163)	134 (135)
Nominal energy class		-	A+++	A++	A+++	A++	A++	A++
Data for Packaged Fiche:								
	Energy efficiency with OTC control (η _s) (*)	%	183 (185)	137 (138)	185 (187)	135 (135)	164 (165)	136 (137)
	Energy class with OTC control	-	A+++	A++	A+++	A++	A++	A++
	Energy efficiency with thermostats/sensors (η _s) (*)	%	184 (186)	138 (139)	186 (188)	136 (136)	165 (166)	137 (138)
	Energy class with thermostats	-	A+++	A++	A+++	A++	A++	A++
Supplementary capacity (P _{SUP})		kW	0.5	2.6	1.9	3.0	1.9	3.5
Type of energy used		-	Electricity					
Declared capacity (P _{dh}) and coefficient of performance (COP _d) at partial load under the following outdoor temperatures:								
Outdoor temperature (T _j) = -7°C	P _{dh}	kW	9.45	8.60	12.00	10.25	13.80	11.20
	COP _d	-	3.05	1.80	2.55	1.70	2.40	1.94
Outdoor temperature (T _j) = +2°C	P _{dh}	kW	5.75	5.23	7.30	6.24	8.40	6.82
	COP _d	-	4.50	3.60	4.70	3.60	3.90	3.35
Outdoor temperature (T _j) = +7°C	P _{dh}	kW	3.70	3.52	4.70	4.01	5.40	4.38
	COP _d	-	6.00	4.80	6.54	4.60	6.16	4.80
Outdoor temperature (T _j) = +12°C	P _{dh}	kW	3.70	3.60	3.50	3.50	3.50	3.60
	COP _d	-	7.50	5.80	7.55	5.50	7.10	7.05
Outdoor temperature (T _j) = Bivalent temperature (T _{biv})	P _{dh}	kW	9.45	8.60	12.00	10.25	13.80	11.20
	COP _d	-	3.05	1.80	2.55	1.70	2.40	1.94
Outdoor temperature (T _j) = Limit operation temperature (TOL)	P _{dh}	kW	10.50	7.40	12.10	9.00	14.10	10.5
	COP _d	-	2.65	1.70	2.50	1.60	2.30	1.40
Bivalent temperature (T _{biv})		°C	-7	-7	-7	-7	-7	-7
Limit operation temperature (TOL)		°C	-10	-10	-10	-10	-10	-10
Water limit operation temperature (WTOL)		°C	55	55	55	55	55	55
Degradation coefficient (C _{dh})		-	0.9	0.9	0.9	0.9	0.9	0.9
Annual energy consumption (Q _{HE})		kW·h	4801 (4753)	5815 (5767)	6022 (5974)	7066 (7018)	7822 (7774)	7640 (7592)

RAS-(4-6)WHNPE + RWD-(4.0-6.0)NW1E-220S(-K)

Model		HP	4.0 HP		5.0 HP		6.0 HP	
		Outdoor unit	RAS-4WHNPE		RAS-5WHNPE		RAS-6WHNPE	
		Indoor unit	RWD-4.0NW1E-220S(-K)		RWD-5.0NW1E-220S(-K)		RWD-6.0NW1E-220S(-K)	
Water outlet temperature			35°C	55°C	35°C	55°C	35°C	55°C
Product description	Air to water heat pump	-	Yes					
	Heat pump combination heater	-	No					
	Low temperature heat pump	-	No					
	Complementary heater	-	Yes					
Design capacity (P _{DESIGN})		kW	11.0	10.0	14.0	12.0	16.0	14.0
Nominal energy efficiency (η _s)		%	180 (183)	135 (136)	182 (185)	132 (133)	161 (163)	134 (135)
Nominal energy class		-	A+++	A++	A+++	A++	A++	A++
Data for Packaged Fiche:								
	Energy efficiency with OTC control (η _s) (*)	%	182 (185)	137 (139)	184 (187)	134 (135)	163 (165)	136 (137)
	Energy class with OTC control	-	A+++	A++	A+++	A++	A++	A++
	Energy efficiency with thermostats/sensors (η _s) (*)	%	183 (186)	138 (140)	185 (188)	135 (136)	164 (166)	137 (138)
	Energy class with thermostats	-	A+++	A++	A+++	A++	A++	A++
Supplementary capacity (P _{SUP})		kW	0.5	2.6	1.9	3.0	1.9	3.5
Type of energy used		-	Electricity					
Declared capacity (P _{dh}) and coefficient of performance (COP _d) at partial load under the following outdoor temperatures:								
Outdoor temperature (T _j) = -7°C	P _{dh}	kW	9.45	8.60	12.00	10.25	13.80	11.20
	COP _d	-	3.05	1.80	2.55	1.70	2.40	1.94
Outdoor temperature (T _j) = +2°C	P _{dh}	kW	5.75	5.23	7.30	6.24	8.40	6.82
	COP _d	-	4.50	3.60	4.70	3.60	3.90	3.35
Outdoor temperature (T _j) = +7°C	P _{dh}	kW	3.70	3.52	4.70	4.01	5.40	4.38
	COP _d	-	6.00	4.80	6.54	4.60	6.16	4.80
Outdoor temperature (T _j) = +12°C	P _{dh}	kW	3.70	3.60	3.50	3.50	3.50	3.60
	COP _d	-	7.50	5.80	7.55	5.50	7.10	7.05
Outdoor temperature (T _j) = Bivalent temperature (T _{biv})	P _{dh}	kW	9.45	8.60	12.00	10.25	13.80	11.20
	COP _d	-	3.05	1.80	2.55	1.70	2.40	1.94
Outdoor temperature (T _j) = Limit operation temperature (TOL)	P _{dh}	kW	10.50	7.40	12.10	9.00	14.10	10.50
	COP _d	-	2.65	1.70	2.50	1.60	2.30	1.40
Bivalent temperature (T _{biv})		°C	-7	-7	-7	-7	-7	-7
Limit operation temperature (TOL)		°C	-10	-10	-10	-10	-10	-10
Water limit operation temperature (WTOL)		°C	55	55	55	55	55	55
Degradation coefficient (C _{dh})		-	0.9	0.9	0.9	0.9	0.9	0.9
Annual energy consumption (Q _{HE})		kW·h	4823 (4753)	5837 (5767)	6044 (5974)	7088 (7018)	7844 (7774)	7662 (7592)

◆ **WARMER climate****RAS-(2-3)WHVRP1 + RWD-(2.0-3.0)RW1E-220S(-K)**

Model	HP		2.0 HP	2.5 HP	3.0 HP
	Outdoor unit		RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
	Indoor unit		RWD-2.0RW1E-220S(-K)	RWD-2.5RW1E-220S(-K)	RWD-3.0RW1E-220S(-K)
Design capacity (P _{DESIGN})		kW	4.0	5.0	6.0
⁽¹⁾ Nominal energy efficiency (η _s)		%	185 (194)	182 (189)	170 (175)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η _s) (*)		%	187 (196)	184 (191)	172 (177)
⁽³⁾ Energy efficiency with thermostats (η _s) (*)		%	188 (197)	185 (192)	173 (178)
Annual energy consumption (Q _{HE})		kW·h	1137 (1084)	1441 (1389)	1857 (1804)

RAS-(4-6)WH(V)NPE + RWD-(4.0-6.0)NW1E-220S(-K)

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHVNPE	RAS-5WHVNPE	RAS-6WHVNPE
	Indoor unit		RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Design capacity (P _{DESIGN})		kW	10	12	14
⁽¹⁾ Nominal energy efficiency (η _s)		%	193 (198)	183 (186)	177 (180)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η _s) (*)		%	195 (200)	185 (188)	179 (182)
⁽³⁾ Energy efficiency with thermostats (η _s) (*)		%	196 (201)	186 (189)	180 (183)
Annual energy consumption (Q _{HE})		kW·h	2722 (2664)	3455 (3397)	4149 (4091)

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHNPE	RAS-5WHNPE	RAS-6WHNPE
	Indoor unit		RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Design capacity (P _{DESIGN})		kW	10	12	14
⁽¹⁾ Nominal energy efficiency (η _s)		%	191 (198)	181 (186)	176 (180)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η _s) (*)		%	193 (200)	183 (188)	178 (182)
⁽³⁾ Energy efficiency with thermostats (η _s) (*)		%	194 (201)	184 (189)	179 (183)
Annual energy consumption (Q _{HE})		kW·h	2748 (2664)	3481 (3397)	4175 (4091)

◆ COLDER climate

RAS-(2-3)WHVRP1 + RWD-(2.0-3.0)RW1E-220S(-K)

Model	HP		2.0 HP	2.5 HP	3.0 HP
	Outdoor unit		RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
	Indoor unit		RWD-2.0RW1E-220S(-K)	RWD-2.5RW1E-220S(-K)	RWD-3.0RW1E-220S(-K)
Design capacity (P _{DESIGN})		kW	4.0	5.0	6.0
⁽¹⁾ Nominal energy efficiency (η _s)		%	123 (125)	122 (123)	118 (118)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η _s) (*)	%	125 (127)	124(125)	120 (120)	
⁽³⁾ Energy efficiency with thermostats (η _s) (*)	%	126 (128)	125 (126)	121 (121)	
Annual energy consumption (Q _{HF})		kW·h	3058 (3031)	4048 (4021)	4910 (4884)

RAS-(4-6)WH(V)NPE + RWD-(4.0-6.0)NW1E-220S(-K)

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHVNPE	RAS-5WHVNPE	RAS-6WHVNPE
	Indoor unit		RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Design capacity (P _{DESIGN})		kW	11	12	14
⁽¹⁾ Nominal energy efficiency (η _s)		%	120 (121)	119 (119)	112 (113)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η _s) (*)		%	122 (123)	121 (121)	114 (115)
⁽³⁾ Energy efficiency with thermostats (η _s) (*)		%	123 (124)	122 (122)	115 (116)
Annual energy consumption (Q _{HE})		kW·h	8641 (8612)	9514 (9485)	11620 (11591)

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHNPE	RAS-5WHNPE	RAS-6WHNPE
	Indoor unit		RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Design capacity (P _{DESIGN})		kW	11	12	14
⁽¹⁾ Nominal energy efficiency (η _s)		%	120 (121)	119 (119)	112 (113)
Data for Packaged Fiche:					
⁽²⁾ Energy efficiency with OTC control (η _s) (*)		%	122 (123)	121 (121)	114 (115)
⁽³⁾ Energy efficiency with thermostats (η _s) (*)		%	123 (124)	122 (122)	115 (116)
Annual energy consumption (Q _{HE})		kW·h	8654 (8612)	9528 (9485)	11633 (11591)

2.2.2.3 ERP additional data - YUTAKI S**RAS-(2-3)WHVRP1 + RWM-(2.0-3.0)R1E**

Model	HP		2.0 HP	2.5 HP	3.0 HP
	Outdoor unit		RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
	Indoor unit		RWM-2.0R1E	RWM-2.5R1E	RWM-3.0R1E
Electrical power input in stand-by mode (Psb)	W		11.9	11.9	11.9
Electrical power input in thermostat-OFF mode (Pto)	W		0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W		11.9	11.9	11.9
Electrical power input in crankcase heater mode (Pck)	W		0.0	0.0	0.0
Sound power level of indoor unit (L _{WA})	dB(A)		37	37	37
Sound power level of outdoor unit (L _{WA})	dB(A)		49	54	57
Capacity control mode	-		Variable (Inverter)		
Integrated supplementary heater	kW		3.0	3.0	3.0
Nominal outdoor air flow	m ³ /h		2436	2436	2682

RAS-(4-6)WH(V)NPE + RWM-(4.0-6.0)N1E

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHVNPE	RAS-5WHVNPE	RAS-6WHVNPE
	Indoor unit		RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E
Electrical power input in stand-by mode (Psb)	W		13.1	13.1	13.1
Electrical power input in thermostat-OFF mode (Pto)	W		0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W		13.1	13.1	13.1
Electrical power input in crankcase heater mode (Pck)	W		0.0	0.0	0.0
Sound power level of indoor unit (L _{WA})	dB(A)		39	39	39
Sound power level of outdoor unit (L _{WA})	dB(A)		58	59	60
Capacity control mode	-		Variable (Inverter)		
Integrated supplementary heater	kW		6.0	6.0	6.0
Nominal outdoor air flow	m ³ /h		4800	5400	6000

Model	HP		4.0 HP	5.0 HP	6.0 HP
	Outdoor unit		RAS-4WHNPE	RAS-5WHNPE	RAS-6WHNPE
	Indoor unit		RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E
Electrical power input in stand-by mode (Psb)	W		19.1	19.1	19.1
Electrical power input in thermostat-OFF mode (Pto)	W		0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W		19.1	19.1	19.1
Electrical power input in crankcase heater mode (Pck)	W		0.0	0.0	0.0
Sound power level of indoor unit (L _{WA})	dB(A)		39	39	39
Sound power level of outdoor unit (L _{WA})	dB(A)		58	59	60
Capacity control mode	-		Variable (Inverter)		
Integrated supplementary heater	kW		6.0	6.0	6.0
Nominal outdoor air flow	m ³ /h		4800	5400	6000

RAS-(8-10)WHNPE + RWM-(8.0-10.0)N1E

Model	HP	8.0 HP	10.0 HP
	Outdoor unit	RAS-8WHNPE	RAS-10WHNPE
	Indoor unit	RWM-8.0N1E	RWM-10.0N1E
Electrical power input in stand-by mode (Psb)	W	36	36
Electrical power input in thermostat-OFF mode (Pto)	W	0.0	0.0
Electrical power input in OFF mode (Poff)	W	36	36
Electrical power input in crankcase heater mode (Pck)	W	0.0	0.0
Sound power level of indoor unit (L _{WA})	dB(A)	47	47
Sound power level of outdoor unit (L _{WA})	dB(A)	59	60
Capacity control mode	-	Variable (inverter)	
Integrated supplementary heater	kW	9.0	9.0
Nominal outdoor air flow	m ³ /h	7620	8040

2.2.2.4 ERP additional data - YUTAKI S Combi**RAS-(2-3)WHVRP1 + RWD-(2.0-3.0)RW1E-220S(-K)**

Model	HP	2.0 HP	2.5 HP	3.0 HP
	Outdoor unit	RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
	Indoor unit	RWD-2.0RW1E-220S(-K)	RWD-2.5RW1E-220S(-K)	RWD-3.0RW1E-220S(-K)
Electrical power input in stand-by mode (Psb)	W	11.9	11.9	11.9
Electrical power input in thermostat-OFF mode (Pto)	W	0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W	11.9	11.9	11.9
Electrical power input in crankcase heater mode (Pck)	W	0.0	0.0	0.0
Sound power level of indoor unit (L _{WA})	dB(A)	37	37	37
Sound power level of outdoor unit (L _{WA})	dB(A)	49	54	57
Capacity control mode	-	Variable (Inverter)		
Integrated supplementary heater	kW	3.0	3.0	3.0
Nominal outdoor air flow	m ³ /h	2436	2436	2682

RAS-(4-6)WHVNPE + RWD-(4.0-6.0)NW1E-220S(-K)

Model	HP	4.0 HP	5.0 HP	6.0 HP
	Outdoor unit	RAS-4WHVNPE	RAS-5WHVNPE	RAS-6WHVNPE
	Indoor unit	RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Electrical power input in stand-by mode (Psb)	W	13.1	13.1	13.1
Electrical power input in thermostat-OFF mode (Pto)	W	0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W	13.1	13.1	13.1
Electrical power input in crankcase heater mode (Pck)	W	0.0	0.0	0.0
Sound power level of indoor unit (L _{WA})	dB(A)	39	39	39
Sound power level of outdoor unit (L _{WA})	dB(A)	58	59	60
Capacity control mode	-	Variable (Inverter)		
Integrated supplementary heater	kW	6.0	6.0	6.0
Nominal outdoor air flow	m ³ /h	4800	5400	6000

RAS-(4-6)WHNPE + RWD-(4.0-6.0)NW1E-220S(-K)

Model	HP	4.0 HP	5.0 HP	6.0 HP
	Outdoor unit	RAS-4WHNPE	RAS-5WHNPE	RAS-6WHNPE
	Indoor unit	RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Electrical power input in stand-by mode (Psb)	W	19.1	19.1	19.1
Electrical power input in thermostat-OFF mode (Pto)	W	0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W	19.1	19.1	19.1
Electrical power input in crankcase heater mode (Pck)	W	0.0	0.0	0.0
Sound power level of indoor unit (L_{WA})	dB(A)	39	39	39
Sound power level of outdoor unit (L_{WA})	dB(A)	58	59	60
Capacity control mode	-	Variable (Inverter)		
Integrated supplementary heater	kW	6.0	6.0	6.0
Nominal outdoor air flow	m³/h	4800	5400	6000

2.2.3 General ERP data for combi heaters**2.2.3.1 YUTAKI S Combi****RAS-(2-3)WHVRP1 + RWD-(2.0-3.0)RW1E-220S(-K)**

Model	HP	2.0 HP	2.5 HP	3.0 HP
	Outdoor unit	RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
	Indoor unit	RWD-2.0RW1E-220S(-K)	RWD-2.5RW1E-220S(-K)	RWD-3.0RW1E-220S(-K)
Declared profile	-	L	L	L
Ability to work during OFF peak hours	-	Yes		
AVERAGE climate				
Water heating energy efficiency (η_{wh})	%	130		
Water heating energy class	-	A+		
Daily electricity consumption	kW·h	3.57		
Annual energy consumption	kW·h	785		
WARMER climate				
Water heating energy efficiency (η_{wh})	%	145		
Daily energy consumption	kW·h	3.21		
Annual energy consumption	kW·h	706		
COLDER climate				
Water heating energy efficiency (η_{wh})	%	112		
Daily energy consumption	kW·h	4.16		
Annual energy consumption	kW·h	914		

RAS-(4-6)WH(V)NPE + RWD-(4.0-6.0)NW1E-220S(-K)

Model	HP	4.0 HP	5.0 HP	6.0 HP
	Outdoor unit	RAS-4WH(V)NPE	RAS-5WH(V)NPE	RAS-6WH(V)NPE
	Indoor unit	RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Declared profile	-	L	L	L
Ability to work during OFF peak hours	-	Yes		
AVERAGE climate				
Water heating energy efficiency (η_{wh})	%	127		
Water heating energy class	-	A+		
Daily electricity consumption	kW·h	3.68		
Annual energy consumption	kW·h	809		
WARMER climate				
Water heating energy efficiency (η_{wh})	%	143		
Daily energy consumption	kW·h	3.26		
Annual energy consumption	kW·h	717		
COLDER climate				
Water heating energy efficiency (η_{wh})	%	111		
Daily energy consumption	kW·h	4.22		
Annual energy consumption	kW·h	926		

2.2.3.2 General ERP data for hot water storage tanks (YUTAKI S)

Model		DHWT-200S-3.0H2E	DHWT-300S-3.0H2E
Storage volume	L	194	264
Standing loss	W	47.3	62.8
Energy efficiency class	-	B	B

2.3 Cooling mode application (EN 14825) (Models with cooling kit accessory)

2.3.1 Cooling data (EN 14825) - YUTAKI S

RAS-(2-3)WHVRP1 + RWM-(2.0-3.0)R1E

Model			Outdoor unit		RAS-2WHVRP1		RAS-2.5WHVRP1		RAS-3WHVRP1	
			Indoor unit		RWM-2.0R1E		RWM-2.5R1E		RWM-3.0R1E	
Water outlet temperature				7°C	18°C	7°C	18°C	7°C	18°C	
Product description	Outdoor side heat exchanger of chiller		-	Air to Water		Air to Water		Air to Water		
	Indoor side heat exchanger chiller		-	Water		Water		Water		
	Type		-	Compressor driven vapour compression		Compressor driven vapour compression		Compressor driven vapour compression		
	Driver of compressor		-	Electric motor		Electric motor		Electric motor		
	Capacity Control			Variable		Variable		Variable		
	Water control			Fixed		Fixed		Fixed		
Rated Cooling Capacity (PRATED,C)			kW	4.00	5.50	5.3	6.30	6.5	7.0	
Seasonal space cooling energy efficiency (ηS,C)			%	220	319	216	337	208	330	
Seasonal energy efficiency ratio cooling mode (SEER)			-	5.57	8.04	5.48	8.50	5.27	8.31	
Seasonal active energy ratio cooling mode (SEERON)			-	5.79	8.38	5.64	8.83	5.39	8.60	
Declared cooling capacity and efficiency ratio for part load at given outdoor temperatures Tj										
	Outdoor temperature (Tj) = 35°C	Pdc	kW	4.00	5.50	5.30	6.30	6.50	7.00	
		EERd	-	4.00	5.40	3.60	5.30	3.35	4.80	
	Outdoor temperature (Tj) = 30°C	Pdc	kW	2.95	4.05	3.91	4.64	4.79	5.16	
		EERd	-	5.00	7.20	4.50	7.00	4.50	6.40	
	Outdoor temperature (Tj) = 25°C	Pdc	kW	2.05	2.61	2.51	2.98	2.90	3.32	
		EERd	-	6.45	9.60	6.30	9.90	6.00	10.0	
	Outdoor temperature (Tj) = 20°C	Pdc	kW	2.88	2.51	2.88	2.65	3.40	3.60	
		EERd	-	8.00	10.3	8.20	12.61	7.50	13.5	
Degradation coefficient (Cdc)			-	0.9	0.9	0.9	0.9	0.9	0.9	
Annual energy consumption (QCE)			kW·h	431	410	581	445	740	505	

RAS-(4-6)WHVNPE + RWM-(4.0-6.0)N1E

Model			Outdoor unit		RAS-4WHVNPE		RAS-5WHVNPE		RAS-6WHVNPE	
			Indoor unit		RWM-4.0N1E		RWM-5.0N1E		RWM-6.0N1E	
Water outlet temperature					7°C	18°C	7°C	18°C	7°C	18°C
Product description	Outdoor side heat exchanger of chiller		-	Air to Water		Air to Water		Air to Water		
	Indoor side heat exchanger chiller		-	Water		Water		Water		
	Type		-	Compressor driven vapour compression		Compressor driven vapour compression		Compressor driven vapour compression		
	Driver of compressor		-	Electric motor		Electric motor		Electric motor		
	Capacity Control			Variable		Variable		Variable		
	Water control			Fixed		Fixed		Fixed		
Rated Cooling Capacity (PRATED,C)			kW	7.2	10.4	9.5	12.9	10.5	13.5	
Seasonal space cooling energy efficiency (ηS,C)			%	202	252	211	323	206	312	
Seasonal energy efficiency ratio cooling mode (SEER)			-	5.13	6.36	5.34	8.14	5.23	7.87	
Seasonal active energy ratio cooling mode (SEERON)			-	5.44	6.69	5.59	8.57	5.45	8.25	
Declared cooling capacity and efficiency ratio for part load at given outdoor temperatures Tj										
	Outdoor temperature (Tj) = 35°C	Pdc	kW	7.2	10.4	9.5	12.9	10.5	13.5	
		EERd	-	3.84	4.5	3.4	4.48	3.23	4.23	
	Outdoor temperature (Tj) = 30°C	Pdc	kW	5.3	7.66	7	9.51	7.8	9.95	
		EERd	-	4.6	6.3	4.75	7.11	4.56	6.86	
	Outdoor temperature (Tj) = 25°C	Pdc	kW	3.5	4.93	4.5	7.2	5	7.2	
		EERd	-	5.8	7.2	5.88	9.98	5.77	9.54	
	Outdoor temperature (Tj) = 20°C	Pdc	kW	3.6	5.1	3.2	7.8	3.2	7.8	
		EERd	-	7.5	8.2	7.84	12.97	7.69	12.47	
Degradation coefficient (Cdc)			-	0.9	0.9	0.9	0.9	0.9	0.9	
Annual energy consumption (QCE)			kW·h	491	572	623	554	702	601	

RAS-(4-6)WHNPE + RWM-(4.0-6.0)N1E

Model			Outdoor unit		RAS-4WHNPE		RAS-5WHNPE		RAS-6WHNPE	
			Indoor unit		RWM-4.0N1E		RWM-5.0N1E		RWM-6.0N1E	
Water outlet temperature					7°C	18°C	7°C	18°C	7°C	18°C
Product description	Outdoor side heat exchanger of chiller		-	Air to Water		Air to Water		Air to Water		
	Indoor side heat exchanger chiller		-	Water		Water		Water		
	Type		-	Compressor driven vapour compression		Compressor driven vapour compression		Compressor driven vapour compression		
	Driver of compressor		-	Electric motor		Electric motor		Electric motor		
	Capacity Control			Variable		Variable		Variable		
	Water control			Fixed		Fixed		Fixed		
Rated Cooling Capacity (PRATED,C)			kW	7.20	10.4	9.5	12.9	10.5	13.5	
Seasonal space cooling energy efficiency ($\eta_{S,C}$)			%	197	246	206	315	203	305	
Seasonal energy efficiency ratio cooling mode (SEER)			-	5.00	6.22	5.23	7.96	5.14	7.7	
Seasonal active energy ratio cooling mode (SEERON)			-	5.44	6.69	5.59	8.57	5.45	8.25	
Declared cooling capacity and efficiency ratio for part load at given outdoor temperatures Tj										
	Outdoor temperature (Tj) = 35°C	Pdc	kW	7.2	10.4	9.5	12.9	10.5	13.5	
		EERd	-	3.84	4.5	3.4	4.48	3.23	4.23	
	Outdoor temperature (Tj) = 30°C	Pdc	kW	5.3	7.66	7	9.51	7.8	9.95	
		EERd	-	4.6	6.3	4.75	7.11	4.56	6.86	
	Outdoor temperature (Tj) = 25°C	Pdc	kW	3.5	4.93	4.5	7.2	5	7.2	
		EERd	-	5.8	7.2	5.88	9.98	5.77	9.54	
	Outdoor temperature (Tj) = 20°C	Pdc	kW	3.6	5.1	3.2	7.8	3.2	7.8	
		EERd	-	7.5	8.2	7.84	12.97	7.69	12.47	
Degradation coefficient (Cdc)			-	0.9	0.9	0.9	0.9	0.9	0.9	
Annual energy consumption (QCE)			kW·h	504	585	636	567	715	613	

RAS-(8-10)WHNPE + RWM-(8.0-10.0)N1E

Model		Outdoor unit		RAS-8WHNPE		RAS-10WHNPE	
		Indoor unit		RWM-8.0N1E		RWM-10.0N1E	
Water outlet temperature				7°C	18°C	7°C	18°C
Product description	Outdoor side heat exchanger of chiller		-	Air to Water		Air to Water	
	Indoor side heat exchanger chiller		-	Water		Water	
	Type		-	Compressor driven vapour compression		Compressor driven vapour compression	
	Driver of compressor		-	Electric motor		Electric motor	
	Capacity Control			Variable		Variable	
	Water control			Fixed		Fixed	
Rated Cooling Capacity (PRATED,C)			kW	14	17	17.5	20
Seasonal space cooling energy efficiency (ηS,C)			%	169	213	159	215
Seasonal energy efficiency ratio cooling mode (SEER)			-	4.29	5.4	4.06	5.44
Seasonal active energy ratio cooling mode (SEERON)			-	4.6	5.8	4.28	5.79
Declared cooling capacity and efficiency ratio for part load at given outdoor temperatures Tj							
	Outdoor temperature (Tj) = 35°C	Pdc	kW	14	17	17.5	20
		EERd	-	3.12	3.81	2.81	3.61
	Outdoor temperature (Tj) = 30°C	Pdc	kW	10.32	12.53	12.9	14.74
		EERd	-	3.92	5.6	3.53	5.5
	Outdoor temperature (Tj) = 25°C	Pdc	kW	6.5	8.2	8.2	8.2
		EERd	-	5.3	6.5	4.87	6.5
	Outdoor temperature (Tj) = 20°C	Pdc	kW	8	8.5	8	8.5
		EERd	-	5.8	6.6	5.5	6.6
Degradation coefficient (Cdc)			-	0.9	0.9	0.9	0.9
Annual energy consumption (QCE)			kW·h	1142	1102	1510	1286

2.3.2 Cooling data (EN 14825) - YUTAKI S Combi**RAS-(2-3)WHVRP1 + RWD-(2.0-3.0)RW1E-220S(-K)**

Model		Outdoor unit	RAS-2WHVRP1		RAS-2.5WHVRP1		RAS-3WHVRP1		
		Indoor unit	RWD-2.0RW1E-220S(-K)		RWD-2.5RW1E-220S(-K)		RWD-3.0RW1E-220S(-K)		
Water outlet temperature			7°C	18°C	7°C	18°C	7°C	18°C	
Product description	Outdoor side heat exchanger of chiller	-	Air to Water		Air to Water		Air to Water		
	Indoor side heat exchanger chiller	-	Water		Water		Water		
	Type	-	Compressor driven vapour compression		Compressor driven vapour compression		Compressor driven vapour compression		
	Driver of compressor	-	Electric motor		Electric motor		Electric motor		
	Capacity Control		Variable		Variable		Variable		
	Water control		Fixed		Fixed		Fixed		
Rated Cooling Capacity (PRATED,C)		kW	4.00	5.50	5.3	6.30	6.5	7.0	
Seasonal space cooling energy efficiency (ηS,C)		%	220	319	216	337	208	330	
Seasonal energy ratio cooling mode (SEER)		-	5.57	8.04	5.48	8.50	5.27	8.31	
Seasonal active energy ratio cooling mode (SEERON)		-	5.79	8.38	5.64	8.83	5.39	8.60	
Declared cooling capacity and efficiency ratio for part load at given outdoor temperatures Tj									
	Outdoor temperature (Tj) = 35°C	Pdc	kW	4.00	5.50	5.30	6.30	6.50	7.00
		EERd	-	4.00	5.40	3.60	5.30	3.35	4.80
	Outdoor temperature (Tj) = 30°C	Pdc	kW	2.95	4.05	3.91	4.64	4.79	5.16
		EERd	-	5.00	7.20	4.50	7.00	4.50	6.40
	Outdoor temperature (Tj) = 25°C	Pdc	kW	2.05	2.61	2.51	2.98	2.90	3.32
		EERd	-	6.45	9.60	6.30	9.90	6.00	10.0
	Outdoor temperature (Tj) = 20°C	Pdc	kW	2.88	2.51	2.88	2.65	3.40	3.60
		EERd	-	8.00	10.3	8.20	12.61	7.50	13.5
Degradation coefficient (Cdc)		-	0.9	0.9	0.9	0.9	0.9	0.9	
Annual energy consumption (QCE)		kW·h	431	410	581	445	740	505	

RAS-(4-6)WHVNPE + RWD-(4.0-6.0)NW1E-220S

Model		Outdoor unit	RAS-4WHVNPE		RAS-5WHVNPE		RAS-6WHVNPE		
		Indoor unit	RWD-4.0NW1E-220S(-K)		RWD-5.0NW1E-220S(-K)		RWD-6.0NW1E-220S(-K)		
Water outlet temperature				7°C	18°C	7°C	18°C	7°C	18°C
Product description	Outdoor side heat exchanger of chiller		-	Air to Water		Air to Water		Air to Water	
	Indoor side heat exchanger chiller		-	Water		Water		Water	
	Type		-	Compressor driven vapour compression		Compressor driven vapour compression		Compressor driven vapour compression	
	Driver of compressor		-	Electric motor		Electric motor		Electric motor	
	Capacity Control			Variable		Variable		Variable	
	Water control			Fixed		Fixed		Fixed	
Rated Cooling Capacity (PRATED,C)			kW	7.2	10.4	9.5	12.9	10.5	13.5
Seasonal space cooling energy efficiency (ηS,C)			%	202	252	211	323	206	312
Seasonal energy ratio cooling mode (SEER)			-	5.13	6.36	5.34	8.14	5.23	7.87
Seasonal active energy ratio cooling mode (SEERON)			-	5.44	6.69	5.59	8.57	5.45	8.25
Declared cooling capacity and efficiency ratio for part load at given outdoor temperatures Tj									
	Outdoor temperature (Tj) = 35°C	Pdc	kW	7.2	10.4	9.5	12.9	10.5	13.5
		EERd	-	3.84	4.5	3.4	4.48	3.23	4.23
	Outdoor temperature (Tj) = 30°C	Pdc	kW	5.3	7.66	7	9.51	7.8	9.95
		EERd	-	4.6	6.3	4.75	7.11	4.56	6.86
	Outdoor temperature (Tj) = 25°C	Pdc	kW	3.5	4.93	4.5	7.2	5	7.2
		EERd	-	5.8	7.2	5.88	9.98	5.77	9.54
	Outdoor temperature (Tj) = 20°C	Pdc	kW	3.6	5.1	3.2	7.8	3.2	7.8
		EERd	-	7.5	8.2	7.84	12.97	7.69	12.47
Degradation coefficient (Cdc)			-	0.9	0.9	0.9	0.9	0.9	0.9
Annual energy consumption (QCE)			kW·h	491	572	623	554	702	601

RAS-(4-6)WHNPE + RWD-(4.0-6.0)NW1E-220S

Model		Outdoor unit		RAS-4WHNPE		RAS-5WHNPE		RAS-6WHNPE	
		Indoor unit		RWD-4.0NW1E-220S(-K)		RWD-5.0NW1E-220S(-K)		RWD-6.0NW1E-220S(-K)	
Water outlet temperature				7°C	18°C	7°C	18°C	7°C	18°C
Product description	Outdoor side heat exchanger of chiller		-	Air to Water		Air to Water		Air to Water	
	Indoor side heat exchanger chiller		-	Water		Water		Water	
	Type		-	Compressor driven vapour compression		Compressor driven vapour compression		Compressor driven vapour compression	
	Driver of compressor		-	Electric motor		Electric motor		Electric motor	
	Capacity Control			Variable		Variable		Variable	
	Water control			Fixed		Fixed		Fixed	
Rated Cooling Capacity (PRATED,C)			kW	7.20	10.4	9.5	12.9	10.5	13.5
Seasonal space cooling energy efficiency (ηS,C)			%	197	246	206	315	203	305
Seasonal energy ratio cooling mode (SEER)			-	5.00	6.22	5.23	7.96	5.14	7.7
Seasonal active energy ratio cooling mode (SEERON)			-	5.44	6.69	5.59	8.57	5.45	8.25
Declared cooling capacity and efficiency ratio for part load at given outdoor temperatures Tj									
	Outdoor temperature (Tj) = 35°C	Pdc	kW	7.2	10.4	9.5	12.9	10.5	13.5
		EERd	-	3.84	4.5	3.4	4.48	3.23	4.23
	Outdoor temperature (Tj) = 30°C	Pdc	kW	5.3	7.66	7	9.51	7.8	9.95
		EERd	-	4.6	6.3	4.75	7.11	4.56	6.86
	Outdoor temperature (Tj) = 25°C	Pdc	kW	3.5	4.93	4.5	7.2	5	7.2
		EERd	-	5.8	7.2	5.88	9.98	5.77	9.54
	Outdoor temperature (Tj) = 20°C	Pdc	kW	3.6	5.1	3.2	7.8	3.2	7.8
		EERd	-	7.5	8.2	7.84	12.97	7.69	12.47
Degradation coefficient (Cdc)			-	0.9	0.9	0.9	0.9	0.9	0.9
Annual energy consumption (QCE)			kW·h	504	585	636	567	715	613

2.3.3 Additional Cooling data (EN 14825) - YUTAKI S**RAS-(2-3)WHVRP1 + RWM-(2.0-3.0)R1E**

Model		Outdoor unit	RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
		Indoor unit	RWM-2.0R1E	RWM-2.5R1E	RWM-3.0R1E
Electrical power input in stand-by mode cooling mode (Psb)		W	11.9	11.9	11.9
Electrical power input in thermostat-OFF cooling mode (Pto)		W	0	0	0
Electrical power input in OFF mode (Poff)		W	11.9	11.9	11.9
Electrical power input in crankcase heater in cooling mode (Pck)		W	0	0	0
Sound power level of indoor unit (LWA)		dB(A)	37	37	37
Sound power level of outdoor unit (LWA)		dB(A)	49	54	57
Capacity control mode		-	Variable (Inverter)	Variable (Inverter)	Variable (Inverter)
Nominal outdoor air flow		m³/h	2436	2436	2682

RAS-(4-6)WH(V)NPE + RWM-(4.0-6.0)N1E

Model	Outdoor unit		RAS-4WHVNPE	RAS-5WHVNPE	RAS-6WHVNPE
	Indoor unit		RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E
Electrical power input in stand-by mode cooling mode (Psb)	W		13.1	13.1	13.1
Electrical power input in thermostat-OFF cooling mode (Pto)	W		0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W		13.1	13.1	13.1
Electrical power input in crankcase heater in cooling mode (Pck)	W		0.0	0.0	0.0
Sound power level of indoor unit (LWA)	dB(A)		39	39	39
Sound power level of outdoor unit (LWA)	dB(A)		58	59	60
Capacity control mode	-		Variable (Inverter)	Variable (Inverter)	Variable (Inverter)
Nominal outdoor air flow	m³/h		4800	5400	6000

RAS-(4-6)WH(V)NPE + RWM-(4.0-6.0)N1E

Model	Outdoor unit		RAS-4WHNPE	RAS-5WHNPE	RAS-6WHNPE
	Indoor unit		RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E
Electrical power input in stand-by mode cooling mode (Psb)	W		19.1	19.1	19.1
Electrical power input in thermostat-OFF cooling mode (Pto)	W		0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W		19.1	19.1	19.1
Electrical power input in crankcase heater in cooling mode (Pck)	W		0.0	0.0	0.0
Sound power level of indoor unit (LWA)	dB(A)		39	39	39
Sound power level of outdoor unit (LWA)	dB(A)		58	59	60
Capacity control mode	-		Variable (Inverter)	Variable (Inverter)	Variable (Inverter)
Nominal outdoor air flow	m³/h		4800	5400	6000

RAS-(8-10)WHNPE + RWM-(8.0-10.0)N1E

Model	Outdoor unit		RAS-8WHNPE	RAS-10WHNPE
	Indoor unit		RWM-8.0N1E	RWM-10.0N1E
Electrical power input in stand-by mode cooling mode (Psb)	W		36	36
Electrical power input in thermostat-OFF cooling mode (Pto)	W		0.0	0.0
Electrical power input in OFF mode (Poff)	W		36	36
Electrical power input in crankcase heater in cooling mode (Pck)	W		0.0	0.0
Sound power level of indoor unit (LWA)	dB(A)		47	47
Sound power level of outdoor unit (LWA)	dB(A)		73	74
Capacity control mode	-		Variable (Inverter)	Variable (Inverter)
Nominal outdoor air flow	m³/h		7620	8040

2.3.4 Additional Cooling data (EN 14825) - YUTAKI S Combi**RAS-(2-3)WHVRP1 + RWD-(2.0-3.0)RW1E-220S(-K)**

Model	Outdoor unit		RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
	Indoor unit		RWD-2.0RW1E-220S(-K)	RWD-2.5RW1E-220S(-K)	RWD-3.0RW1E-220S(-K)
Electrical power input in stand-by mode cooling mode (Psb)	W		11.9	11.9	11.9
Electrical power input in thermostat-OFF cooling mode (Pto)	W		0	0	0
Electrical power input in OFF mode (Poff)	W		11.9	11.9	11.9
Electrical power input in crankcase heater in cooling mode (Pck)	W		0	0	0
Sound power level of indoor unit (LWA)	dB(A)		37	37	37
Sound power level of outdoor unit (LWA)	dB(A)		49	54	57
Capacity control mode	-		Variable (Inverter)	Variable (Inverter)	Variable (Inverter)
Nominal outdoor air flow	m³/h		2436	2436	2682

RAS-(4-6)WHVNPE + RWD-(4.0-6.0)NW1E-220S(-K)

Model	Outdoor unit		RAS-4WHVNPE	RAS-5WHVNPE	RAS-6WHVNPE
	Indoor unit		RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Electrical power input in stand-by mode cooling mode (Psb)	W		13.1	13.1	13.1
Electrical power input in thermostat-OFF cooling mode (Pto)	W		0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W		13.1	13.1	13.1
Electrical power input in crankcase heater in cooling mode (Pck)	W		0.0	0.0	0.0
Sound power level of indoor unit (LWA)	dB(A)		39	39	39
Sound power level of outdoor unit (LWA)	dB(A)		58	59	60
Capacity control mode	-		Variable (Inverter)	Variable (Inverter)	Variable (Inverter)
Nominal outdoor air flow	m³/h		4800	5400	6000

RAS-(4-6)WHNPE + RWD-(4.0-6.0)NW1E-220S(-K)

Model	Outdoor unit		RAS-4WHNPE	RAS-5WHNPE	RAS-6WHNPE
	Indoor unit		RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Electrical power input in stand-by mode cooling mode (Psb)	W		19.1	19.1	19.1
Electrical power input in thermostat-OFF cooling mode (Pto)	W		0.0	0.0	0.0
Electrical power input in OFF mode (Poff)	W		19.1	19.1	19.1
Electrical power input in crankcase heater in cooling mode (Pck)	W		0.0	0.0	0.0
Sound power level of indoor unit (LWA)	dB(A)		39	39	39
Sound power level of outdoor unit (LWA)	dB(A)		58	59	60
Capacity control mode	-		Variable (Inverter)	Variable (Inverter)	Variable (Inverter)
Nominal outdoor air flow	m³/h		4800	5400	6000

2.4 General specifications

2.4.1 Considerations

- The sound data is based on the following conditions:
 - Outdoor ambient temperature (DB/WB): 7/6°C.
 - Water inlet/outlet temperature: 47/55°C (mark: *1); 30/35°C (mark: *2).
 - Distance of the unit from the measuring point: At 1 meter from the unit's front surface; 1,5 meter from floor level.
 - The sound pressure level is measured in an anechoic chamber, so reflected sound should be taken into consideration when installing the unit.
 - The sound power level is measured in a reverberant room, in accordance with the standard EN12102. Full load values are obtained in the same environmental conditions specified in EN14511 for performance test. Part Load values are obtained in the same environmental conditions specified for 7°C and average climate in EN14825.
- The nominal water flow rate is calculated under the following conditions:
 - Outdoor ambient temperature (DB/WB): 7/6°C.
 - Water inlet/outlet temperature: 47/55°C (mark: *1); 30/35°C (mark: *2).
- *Regarding data market with mark: *3, it corresponds to the height of the unit with the minimum mounting foot height. This value can be adjusted up to +30 mm.*
- *For specific details about data corresponding to the working range, please refer to the chapter "5. Working range".*

Keywords:

- *DB: Dry bulb*
- *WB: Wet bulb*

2.4.2 Split system - Outdoor unit**RAS-(2-3)WHVRP1**

Model			RAS-2WHVRP1	RAS-2.5WHVRP1	RAS-3WHVRP1
Power supply		-	1~ 230V 50Hz		
Noise level (sound power) - Full load	(*1)	dB(A)	61	63	69
	(*2)		61	63	67
Noise level (sound power) - Part load	(*1)	dB(A)	49	54	57
	(*2)		49	54	57
Air flow		m ³ /min	42.1	42.1	49.7
Cabinet colour (Munsell code)		-	Natural Gray (1.0Y 8.5/0.5)		
Dimensions (H x W x D)		mm	629 x 799 (+99) x 300		
Net weight		kg	45	45	44
Gross weight		kg	49	49	48
Piping diameter (liquid / gas)		mm (in.)	Ø6.35 (1/4) / Ø12.7 (1/2)	Ø6.35 (1/4) / Ø12.7 (1/2)	Ø6.35 (1/4) / Ø15.88 (5/8)
Minimum piping length		m	3		
Maximum chargeless piping length		m	10		
Maximum piping length		m	50	50	40
Height difference between OU and IU (higher OU / lower OU)		m	30 / 20		
Working range (Heating)	Outdoor ambient temperature	°C (DB)	-20~25		
	Outlet water temperature	°C	20~60		
Working range (Cooling)	Outdoor ambient temperature	°C (DB)	10~46		
	Outlet water temperature	°C	5~22		
Working range (DHW)	Outdoor ambient temperature	°C (DB)	-20~35		
	Tank water temperature	°C	30~75		
Refrigerant		-	R32		
Refrigerant charge before shipment		kg	1.2	1.3	1.3
Compressor type		-	Scroll DC Inverter driven		Rotary DC Inverter driven

RAS-(4-6)WHVNPE

Model		RAS-4WHVNPE	RAS-5WHVNPE	RAS-6WHVNPE
Power supply	-	1~ 230V 50Hz		
Noise level (sound pressure)	dB(A)	49	50	50
Noise level (sound power)	(*1)	64	65	67
- Full load	(*2)	63	64	65
Noise level (sound power)	(*1)	58	59	60
- Part load	(*2)	58	59	60
Air flow	m ³ /min	80	90	100
Cabinet colour (Munsell code)	-	Natural grey (1.0Y 8.5/0.5)		
Dimensions (H x W x D)	mm	1380 x 950 x 370		
Net weight	kg	103	103	103
Gross weight	kg	116	116	116
Piping diameter (liquid / gas)	mm (in.)	Ø9.52 (3/8) / Ø15.88 (5/8)	Ø9.52 (3/8) / Ø15.88 (5/8)	Ø9.52 (3/8) / Ø15.88 (5/8)
Minimum piping length	m	5		
Maximum chargeless piping length	m	15		
Maximum piping length (additional refrigerant charge needed)	m (g/m)	75 (60)		
Height difference between OU and IU (higher OU / lower OU)	m	30 / 20		
Working range (cooling // heating // DHW)	°C (DB)	10~+46 // -25~+25 // -25~+35		
Refrigerant	-	R410A		
Refrigerant charge before shipment	kg	3.3	3.4	3.4
Compressor type	-	Scroll DC Inverter driven		

RAS-(4-6)WHNPE

Model		RAS-4WHNPE	RAS-5WHNPE	RAS-6WHNPE
Power supply	-	3N~ 400V 50Hz		
Noise level (sound pressure)	dB(A)	49	50	50
Noise level (sound power)	(*1)	64	65	67
- Full load	(*2)	63	64	65
Noise level (sound power)	(*1)	58	59	60
- Part load	(*2)	58	59	60
Air flow	m ³ /min	80	90	100
Cabinet colour (Munsell code)	-	Natural grey (1.0Y 8.5/0.5)		
Dimensions (H x W x D)	mm	1380 x 950 x 370		
Net weight	kg	103	103	103
Gross weight	kg	116	116	116
Piping diameter (liquid / gas)	mm (in.)	Ø9.52 (3/8) / Ø15.88 (5/8)	Ø9.52 (3/8) / Ø15.88 (5/8)	Ø9.52 (3/8) / Ø15.88 (5/8)
Minimum piping length	m	5		
Maximum chargeless piping length	m	15		
Maximum piping length (additional refrigerant charge needed)	m (g/m)	75 (60)		
Height difference between OU and IU (higher OU / lower OU)	m	30 / 20		
Working range (cooling // heating // DHW)	°C (DB)	10~+46 // -25~+25 // -25~+35		
Refrigerant	-	R410A		
Refrigerant charge before shipment	kg	3.3	3.4	3.4
Compressor type	-	Scroll DC Inverter driven		

RAS-(8-10)WHNPE

Model		RAS-8WHNPE	RAS-10WHNPE
Power supply	-	3N~ 400V 50Hz	
Noise level (sound pressure)	dB(A)	59	60
Noise level (sound power)	(*1)	73	74
	(*2)	71	72
Air flow	m ³ /min	127	134
Cabinet colour (Munsell code)	-	Natural grey (1.0Y 8.5/0.5)	
Dimensions (H x W x D)	mm	1380 x 950 x 370	
Net weight	kg	137	139
Gross weight	kg	152	154
Piping diameter (liquid / gas)	mm (in.)	Ø9.52 (3/8) / Ø25.4 (1)	Ø12.70 (1/2) / Ø25.4 (1)
Minimum piping length	m	5	
Maximum chargeless piping length	m	15	
Maximum piping length (additional refrigerant charge needed)	m (g/m)	70 (65)	
Height difference between OU and IU (higher OU / lower OU)	m	30 / 20	
Refrigerant	-	R410A	
Refrigerant charge before shipment	kg	5.0	5.3
Compressor type	-	Scroll DC Inverter driven	

2.4.3 Split system - Indoor unit**2.4.3.1 YUTAKI S****RWM-(2.0-3.0)R1E**

Model			RWM-2.0R1E	RWM-2.5R1E	RWM-3.0R1E
Power supply		-	1~ 230V 50Hz / 3N~ 400V 50Hz		
Noise level (sound power)		dB(A)	37		
Minimum water flow rate		m³/h	0.5	0.6	0.6
Maximum water flow rate		m³/h	1.9	2.0	2.1
Cabinet	Material	-	Precoated galvanised steel		
	Colour	-	Pure white (RAL 9010)		
Unit dimensions	Height (with connections)	mm	712 (782)		
	Width	mm	450		
	Depth	mm	285		
Packaging dimensions	Height	mm	478		
	Width	mm	905		
	Depth	mm	539		
Packaging volume		m³	0.23		
Packaging materials		-	Wood - Carton - Plastic		
Net weight		kg	35	36	37
Gross weight		kg	44	45	46
Refrigerant pipes connection	Connection type	-	Flare nut connection		
	Liquid pipe diameter	mm (in.)	Ø6.35 (1/4")	Ø9.52 (3/8")	
	Gas pipe diameter	mm (in.)	Ø15.88 (5/8")		
Space heating pipes connection	Connection type	-	Screwed connection		
	Shutdown valves	mm (in.)	G 1" (male) - G 1" (male)		
	Inlet pipe diameter	mm (in.)	G 1" (female)		
	Outlet pipe diameter	mm (in.)	G 1" (female)		
Working range (Heating)	Outdoor ambient temperature	°C (DB)	-20~25		
	Indoor ambient temperature	°C (DB)	5~30		
	Outlet water temperature	°C	20~60		
Working range (Cooling)	Outdoor ambient temperature	°C (DB)	10~46		
	Indoor ambient temperature	°C (DB)	5~30		
	Outlet water temperature	°C	5~22		

RWM-(4.0-10.0)N1E

Model			RWM-4.0N1E	RWM-5.0N1E	RWM-6.0N1E	RWM-8.0N1E	RWM-10.0N1E
Power supply		-	1~ 230V 50Hz / 3N~ 400V 50Hz			3N~ 400V 50Hz	
Noise level (sound power)		dB(A)	39			47	
Minimum water flow rate		m³/h	1.0	1.1	1.2	2.0	2.2
Maximum water flow rate		m³/h	2.9	3.0	3.0	4.5	4.6
Cabinet	Material	-	Precoated galvanised steel				
	Colour	-	Pure white (RAL 9010)				
Unit dimensions	Height (with connections)	mm	890 (960)				
	Width	mm	520			670	
	Depth	mm	370				
Packaging dimensions	Height	mm	556				
	Width	mm	1120				
	Depth	mm	610			760	
Packaging volume		m³	0.38			0.47	
Packaging materials		-	Wood - Carton - Plastic				
Net weight		kg	46	48		60	62
Gross weight		kg	61	63		76	78
Refrigerant pipes connection	Connection type	-	Flare nut connection			Liquid pipe: Flare nut connection; Gas pipe: Brazed connection	
	Liquid pipe diameter	mm (in.)	Ø9.52 (3/8")				Ø12.7 (3/8")
	Gas pipe diameter	mm (in.)	Ø15.88 (5/8")			Ø25.4 (1")	
Space heating pipes connection	Connection type	-	Screwed connection				
	Shutdown valves	mm (in.)	G 1-1/4" (male) - G 1-1/4" (male)				
	Inlet pipe diameter	mm (in.)	G 1-1/4" (female)				
	Outlet pipe diameter	mm (in.)	G 1-1/4" (female)				
Working range (Heating)	Outdoor ambient temperature	°C (DB)	-25~25				
	Indoor ambient temperature	°C (DB)	5~30				
	Outlet water temperature	°C	20~60				
Working range (Cooling)	Outdoor ambient temperature	°C (DB)	10~46				
	Indoor ambient temperature	°C (DB)	5~30				
	Outlet water temperature	°C	5~22				

2.4.3.2 YUTAKI S Combi

◆ Standard model and UK market model

RWD-(2.0-3.0)RW1E-220S(-K)

Model			RWD-2.0RW1E-220S(-K)	RWD-2.5RW1E-220S(-K)	RWD-3.0RW1E-220S(-K)
Power supply		-	1~ 230V 50Hz / 3N~ 400V 50Hz		
Noise level (sound power)		dB(A)	37		
Minimum water flow rate		m³/h	0.5	0.6	0.6
Maximum water flow rate		m³/h	1.8	1.9	1.9
Cabinet	Material	-	Precoated galvanised steel		
	Colour	-	Pure white (RAL 9010)		
Unit dimensions	Height (with connections)	mm	1788 (1889)		
	Width	mm	595		
	Depth	mm	598		
Packaging dimensions	Height	mm	2045		
	Width	mm	670		
	Depth	mm	656		
Packaging volume		m³	0.90		
Packaging materials		-	Wood - Carton - Plastic		
Net weight		kg	109	110	111
Gross weight		kg	122	123	124
Refrigerant pipes connection	Connection type	-	Flare nut connection		
	Liquid pipe diameter	mm (in.)	Ø6.35 (1/4")	Ø9.52 (3/8")	
	Gas pipe diameter	mm (in.)	Ø15.88 (5/8")		
Space heating pipes connection	Connection type	-	Screwed connection		
	Shut-off valves	mm (in.)	G 1" (male) - G 1" (male)		
	Inlet pipe diameter	mm (in.)	G 1" (female)		
	Outlet pipe diameter	mm (in.)	G 1" (female)		
DHW pipes connection	Connection type	-	Screwed connection		
	Inlet pipe diameter	mm (in.)	G 3/4" (male)		
	Outlet pipe diameter	mm (in.)	G 3/4" (male)		
Working range (Heating)	Outdoor ambient temperature	°C (WB)	-20~25		
	Indoor ambient temperature	°C (WB)	5~30		
	Outlet water temperature	°C	20~60		
Working range (Cooling)	Outdoor ambient temperature	°C (DB)	10~46		
	Indoor ambient temperature	°C (DB)	5~30		
	Outlet water temperature	°C	5~22		
Working range (DHW)	Outdoor ambient temperature	°C (DB)	-20~35		
	Indoor ambient temperature	°C (DB)	5~30		
	Tank water temperature	°C	30~75		

RWD-(4.0-6.0)NW1E-220S(-K)

Model			RWD-4.0NW1E-220S(-K)	RWD-5.0NW1E-220S(-K)	RWD-6.0NW1E-220S(-K)
Power supply		-	1~ 230V 50Hz / 3N~ 400V 50Hz		
Noise level (sound power)		dB(A)	39		
Minimum water flow rate		m³/h	1.0	1.1	1.2
Maximum water flow rate		m³/h	2.7	2.8	2.8
Cabinet	Material	-	Precoated galvanised steel		
	Colour	-	Pure white (RAL 9010)		
Unit dimensions	Height (with connections)	mm	1788 (1889)		
	Width	mm	595		
	Depth	mm	598		
Packaging dimensions	Height	mm	2045		
	Width	mm	670		
	Depth	mm	656		
Packaging volume		m³	0.90		
Packaging materials		-	Wood - Carton - Plastic		
Net weight		kg	115	117	117
Gross weight		kg	128	130	130
Refrigerant pipes connection	Connection type	-	Flare nut connection		
	Liquid pipe diameter	mm (in.)	Ø9.52 (3/8")		
	Gas pipe diameter	mm (in.)	Ø15.88 (5/8")		
Space heating pipes connection	Connection type	-	Screwed connection		
	Shut-off valves	mm (in.)	G 1" (male) - G 1" (male)		
	Inlet pipe diameter	mm (in.)	G 1" (female)		
	Outlet pipe diameter	mm (in.)	G 1" (female)		
DHW pipes connection	Connection type	-	Screwed connection		
	Inlet pipe diameter	mm (in.)	G 3/4" (male)		
	Outlet pipe diameter	mm (in.)	G 3/4" (male)		
Working range (Heating)	Outdoor ambient temperature	°C (WB)	-25~25		
	Indoor ambient temperature	°C (WB)	5~30		
	Outlet water temperature	°C	20~60		
Working range (Cooling)	Outdoor ambient temperature	°C (DB)	10~46		
	Indoor ambient temperature	°C (DB)	5~30		
	Outlet water temperature	°C	5~22		
Working range (DHW)	Outdoor ambient temperature	°C (DB)	-25~35		
	Indoor ambient temperature	°C (DB)	5~30		
	Tank water temperature	°C	30~75		

2.4.4 Domestic Hot Water Tank

Model				DHWT-200S-3.0H2E	DHWT-300S-3.0H2E
Casing	Color			White	
	Material			Polypropylene jacketed	
Dimensions	Packing	Height	mm	1300	1880
		Width	mm	600	600
		Depth	mm	600	600
	Unit	Height	mm	1270	1750
		Width	mm	595	595
		Depth	mm	595	595
Weight	Unit		kg	53	63
	Packed unit		kg	63.5	73

Model				DHWT-200S-3.0H2E		DHWT-300S-3.0H2E		
Packing	Material			EPS				
				CARTON				
	Weight		kg	10.5		11		
Main components	Tank	Water volume		L	194		282	
		Material		Stainless Steel				
		Max tank temperature		°C	75		75	
		Max tank water pressure		bar	10		10	
		Maximum heating coil water working temperature		°C	99		99	
		Maximum heating coil water working pressure		bar	10		10	
Tank	Insulation	Material		Polyurethane				
		Heat loss (*)		kW·h/day	1.128		1.512	
		Min thickness		mm	50		50	
Main components	Heat exchanger	Quantity		1		1		
		Coil surface area		m²	1.4		1.8	
	Booster heater	Quantity		1		1		
		Heater rating		kW	3		3	
	Type				Immersion heater type			
Piping connections	Water inlet domestic connection		inches	¾ (female)				
	Water outlet domestic connection		inches	¾ (female)				
	Recirculation		inches	¾ (female)				
	In coil connection		inches	¾ (female)				
	Out coil connection		inches	¾ (female)				
Thermometer				Yes				
Mechanical thermostat (security)				Yes				
Protection				-				



NOTE

- (*): Heat loss according to EN-12897:2007
- A table with the selection of domestic hot water (DHW) tanks recommended by Hitachi for the different existing combinations is shown below:

YUTAKI S system	Domestic hot water tank
RAS-2WHVRP1 + RWM-2.0R1E	DHWT-200S-3.0H2E DHWT-300S-3.0H2E
RAS-2.5WHVRP1 + RWM-2.5R1E	
RAS-3WHVRP1 + RWM-3.0R1E	
RAS-4WH(V)NPE + RWM-4.0N1E	DHWT-300S-3.0H2E
RAS-5WH(V)NPE + RWM-5.0N1E	
RAS-6WH(V)NPE + RWM-6.0N1E	
RAS-8WHNPE + RWM-8.0N1E	
RAS-10WHNPE + RWM-10.0N1E	

The YUTAKI S system is designed for combination with a Hitachi domestic hot water tank. In case that another tank is being used in combination with a YUTAKI S system, Hitachi cannot guarantee the correct operation or reliability of the system.

5. Working range

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5.1 Power supply working range

◆ Nominal power supply

- Single phase: 1~ 230V 50Hz
- Three phase: 3N~ 400V 50Hz

◆ Operating voltage

Between 90 and 110% of the nominal voltage.

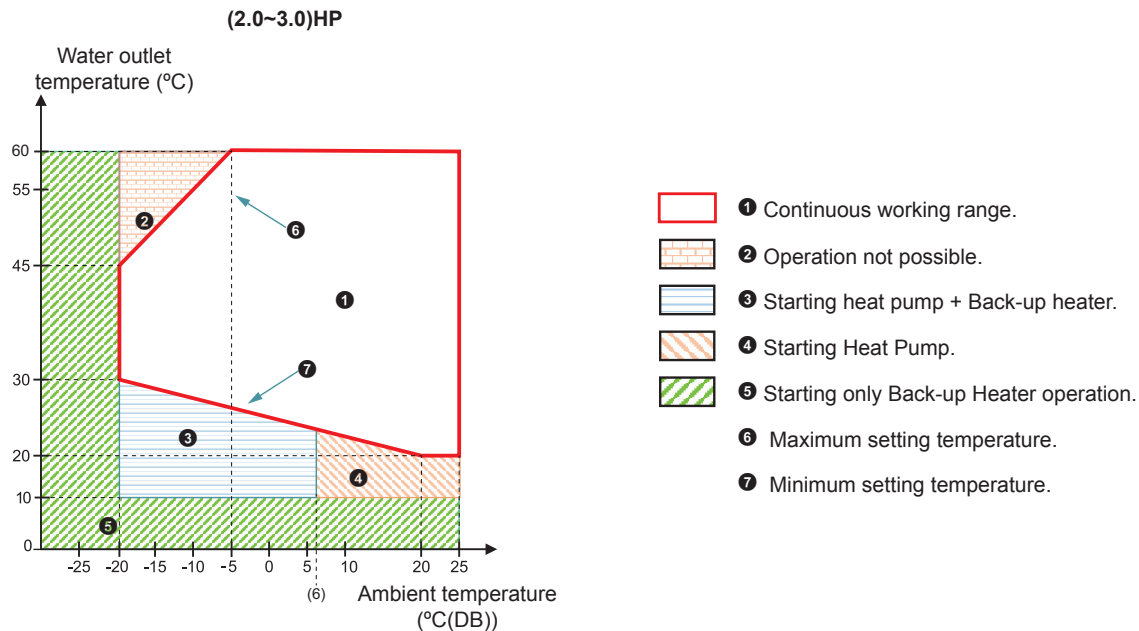
◆ Starting voltage

Always higher than 85% of the nominal voltage.

5.2 Temperature working range

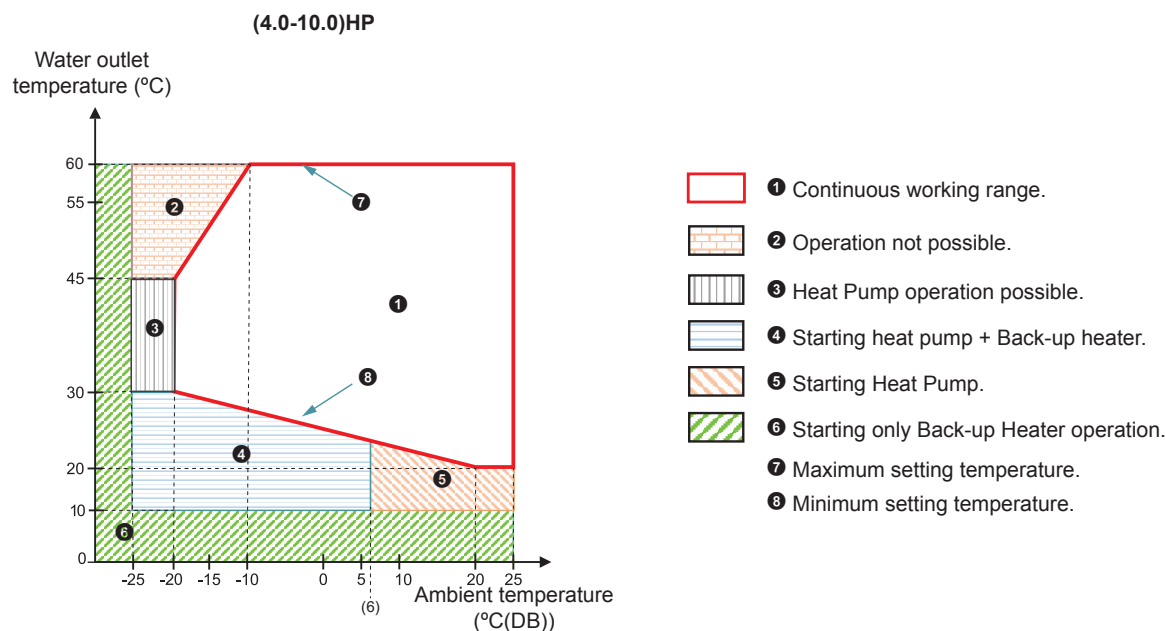
MODEL		2.0HP	2.5HP	3.0HP	4.0HP	5.0HP	6.0HP	8.0HP	10.0HP
Water temperature	°C	Refer to the graphics for each case							
Indoor ambient temperature									
		5~30							

5.2.1 Space heating



NOTE

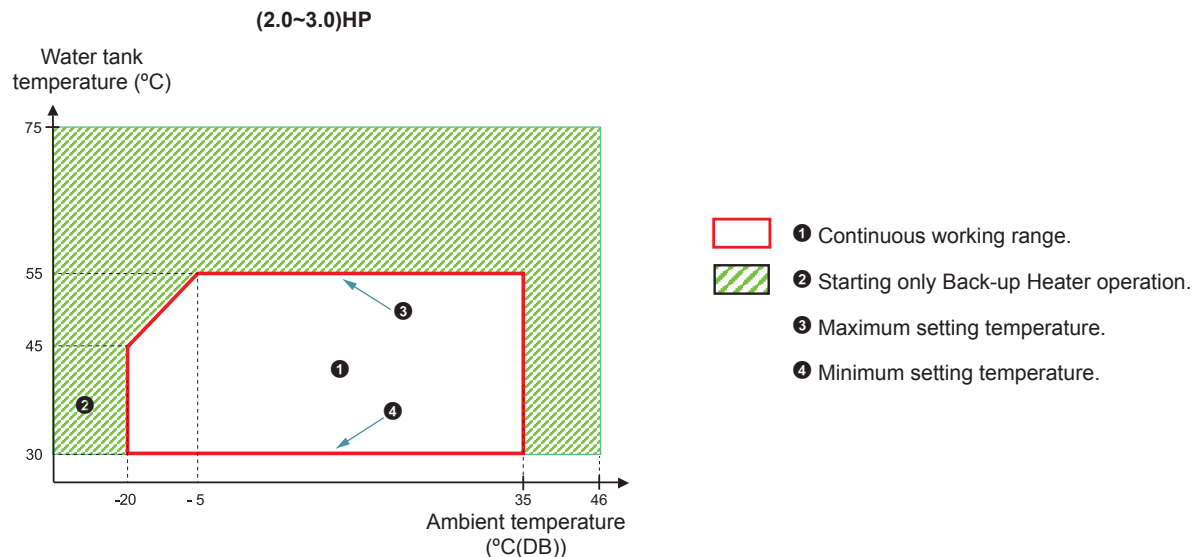
Items ③ and ⑤ only available if back-up heater is enabled



i NOTE

Items 4 and 6 only available if back-up heater is enabled.

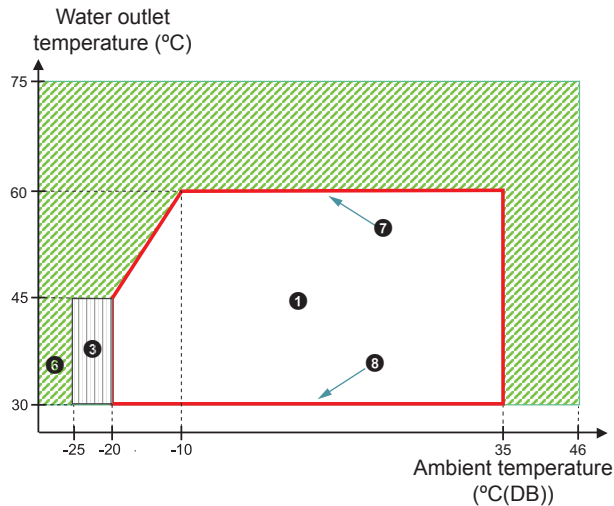
5.2.2 DHW



i NOTE

In case of heating up the DHW tank with an outdoor ambient temperature lower than -5 °C and without using the DHW electrical heater, the setting temperature must not exceed the maximum value in the specified continuous working range.

(4.0-10.0)HP



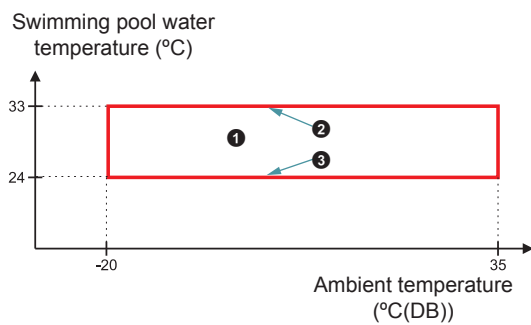
- 1 Continuous working range.
- 3 Heat Pump operation possible.
- 6 Starting only Back-up Heater operation.
- 7 Maximum setting temperature.
- 8 Minimum setting temperature.

**NOTE**

In case of heating up the DHW tank with an outdoor ambient temperature lower than -10 °C and without using the DHW electrical heater, the setting temperature must not exceed the maximum value in the specified continuous working range.

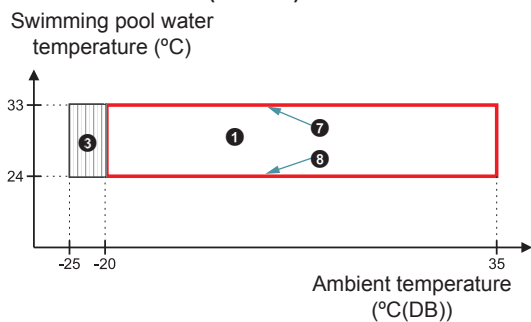
5.2.3 Swimming pool heating

(2.0~3.0)HP

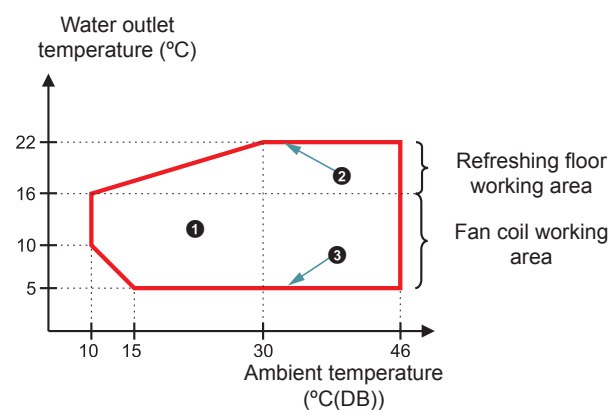


- 1 Continuous working range.
- 2 Maximum setting temperature.
- 3 Minimum setting temperature.

(4.0-10.0)HP



- 1 Continuous working range.
- 3 Heat Pump operation possible.
- 7 Maximum setting temperature.
- 8 Minimum setting temperature.

5.2.4 Space cooling (Necessary cooling kit)

- 1 Continuous working range.
- 2 Maximum setting temperature.
- 3 Minimum setting temperature.

5.3 Hydraulic working range

5.3.1 Hydraulic data

◆ YUTAKI S

MODEL		2.0 HP	2.5 HP	3.0 HP	4.0 HP	5.0 HP	6.0 HP	8.0 HP	10.0 HP
Minimum water flow rate (*1)	m³/h	0.5	0.6	0.6	1.0	1.1	1.2	2.0	2.2
Maximum water flow rate (*1)	m³/h	1.9	2.0	2.1	2.9	3.0	3.0	4.5	4.6
Minimum installation water volume (*2)	l	28	28	28	38	46	55	76	79
Minimum allowable water pressure	MPa	0.1							
Maximum allowable water pressure	MPa	0.3							

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MODEL		2.0 HP	2.5 HP	3.0 HP	4.0 HP	5.0 HP	6.0 HP
Minimum water flow rate (*1)	m³/h	0.5	0.6	0.6	1.0	1.1	1.2
Maximum water flow rate (*1)	m³/h	1.8	1.9	1.9	2.7	2.8	2.8
Minimum installation water volume (*2)	l	28	28	28	38	46	55
Minimum allowable water pressure	MPa	0.1					
Maximum allowable water pressure	MPa	0.3					



NOTE

- (*1): Values calculated based on the following conditions:
Water inlet/outlet temperature: 30/35 °C
Outdoor ambient temperature: (DB/WB): 7/6 °C
- (*2): Values calculated with an ON/OFF temperature differential value of 4 °C.

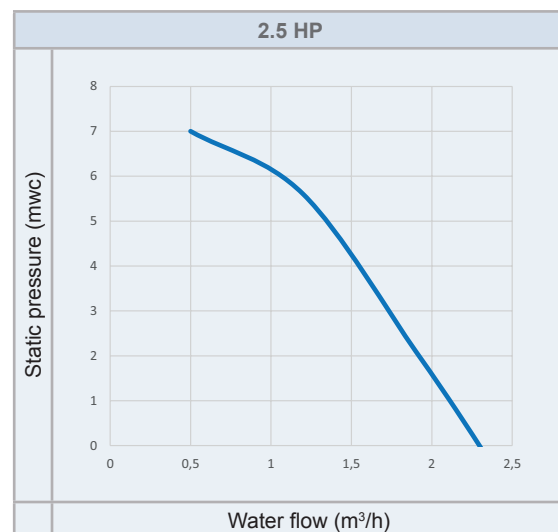
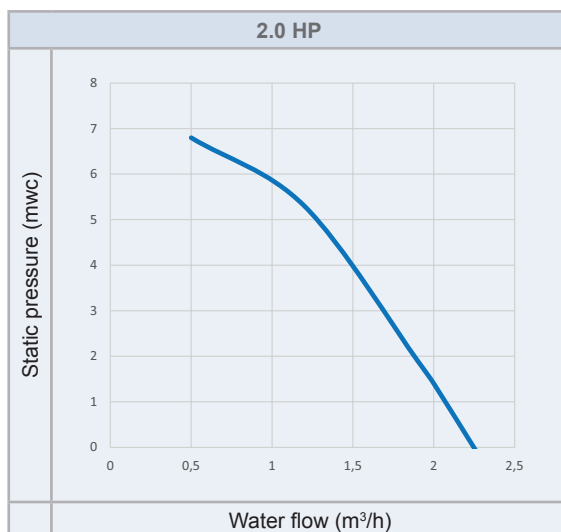
5.3.2 Pump performance curves

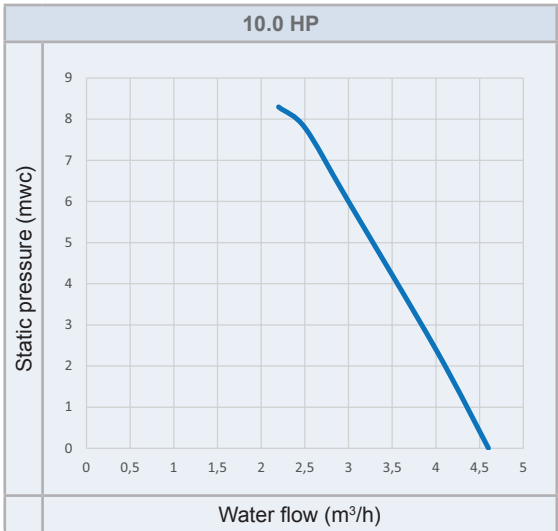
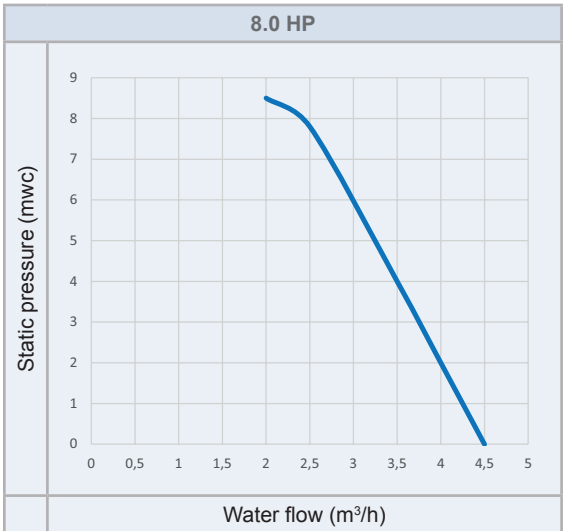
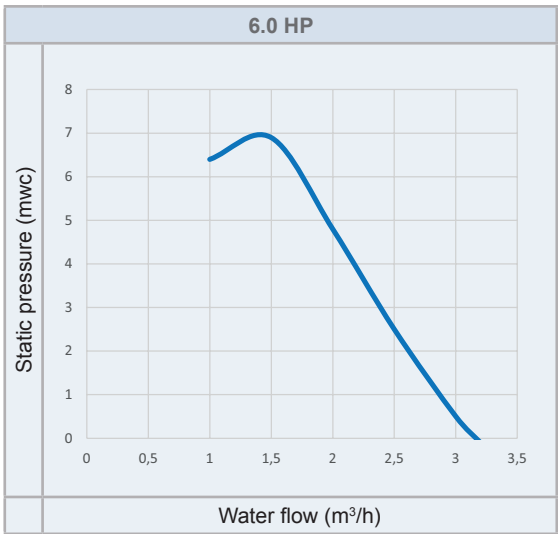
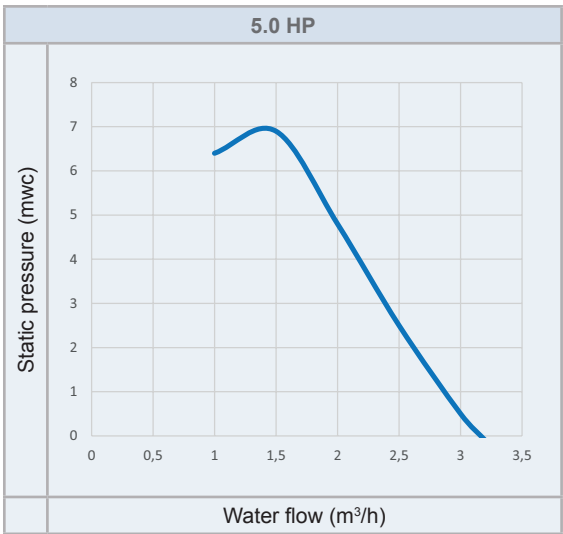
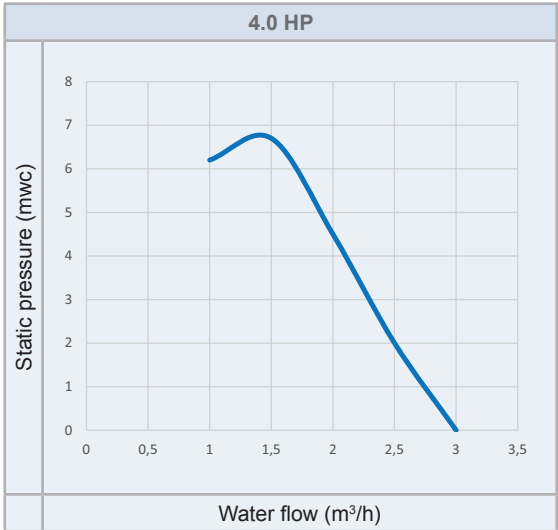
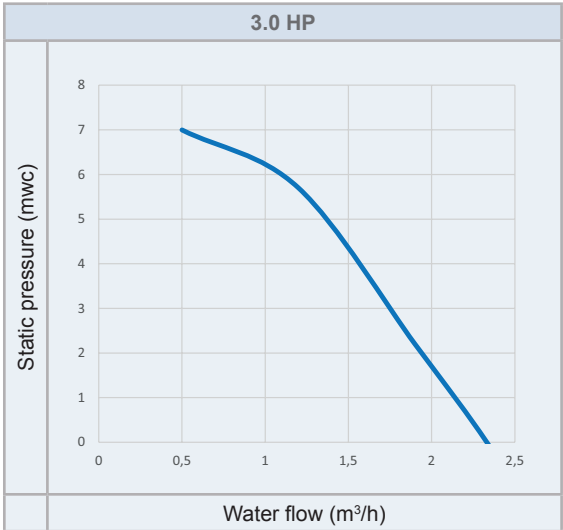


NOTE

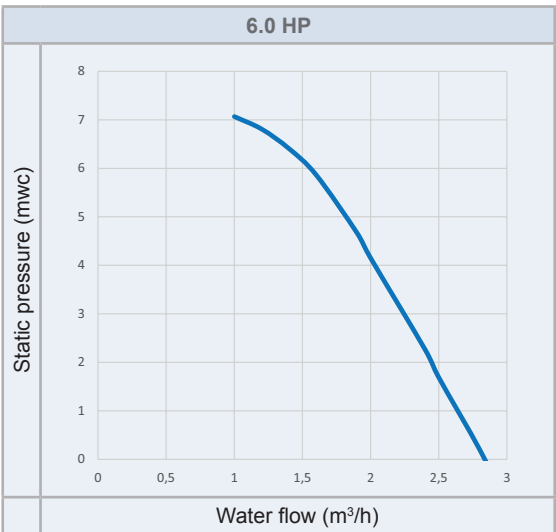
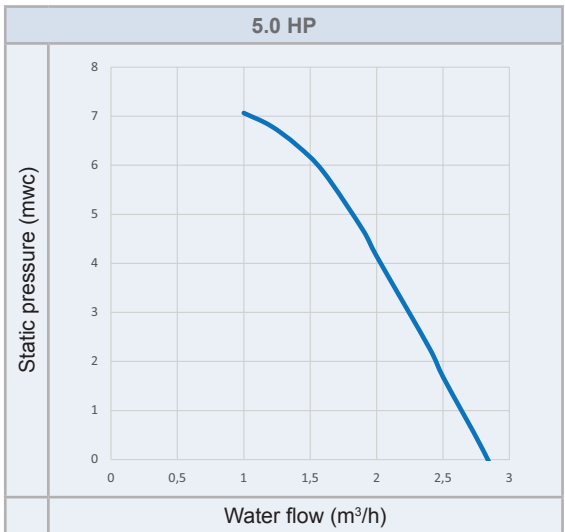
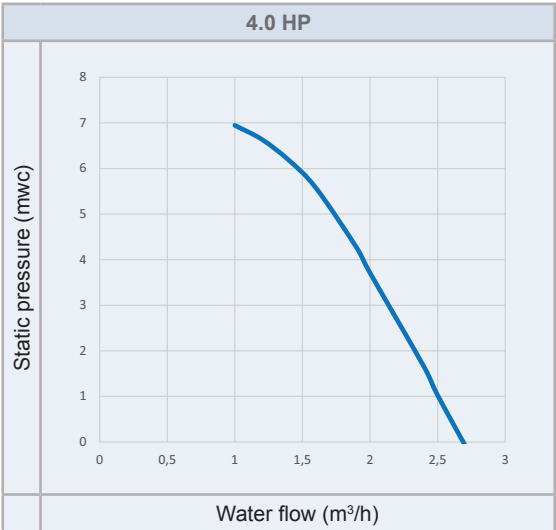
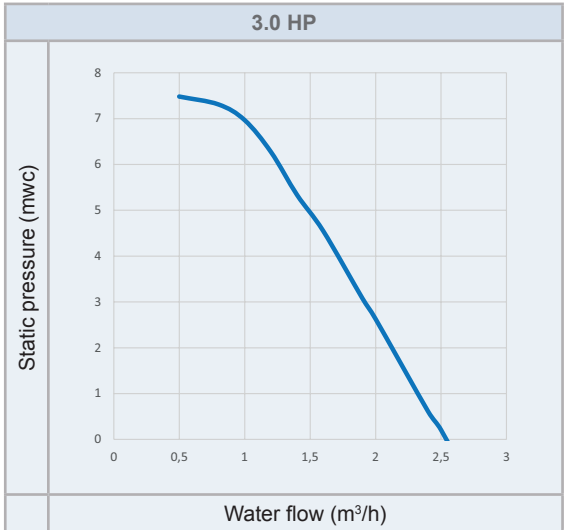
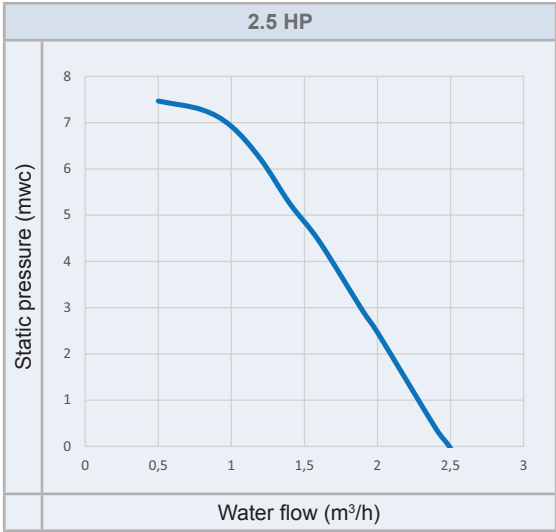
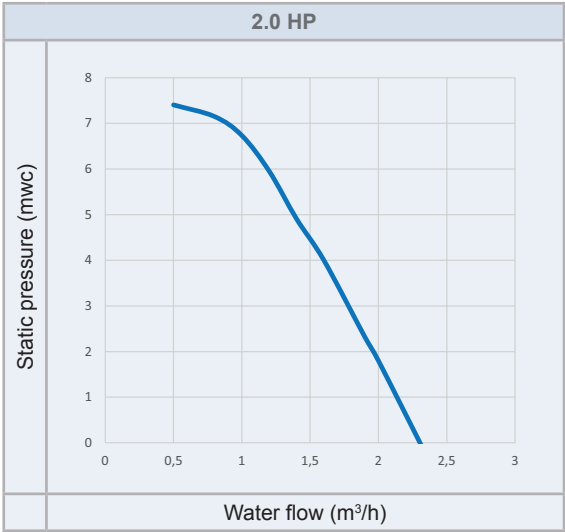
If a water flow rate is selected out of the working range of the unit, it can cause malfunction on the unit. Please, try to operate the pump within the minimum and maximum water flow of the indoor unit.

◆ YUTAKI S





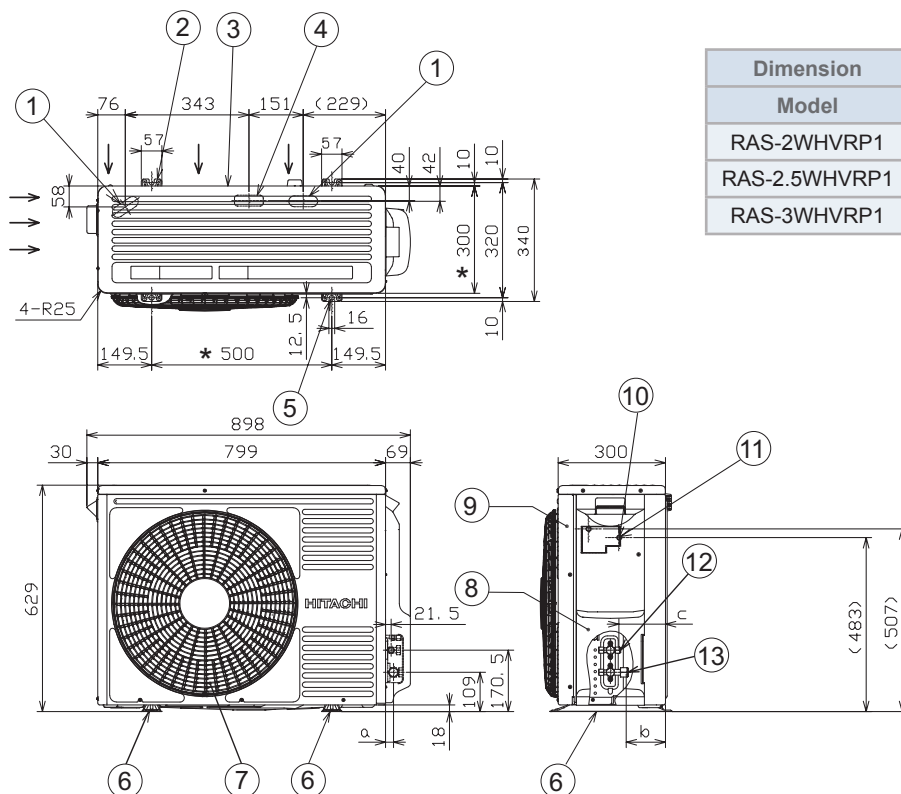
◆ YUTAKI S Combi



6.1 Name of parts and Dimensional data

6.1.1 Split system - Outdoor unit

◆ RAS-(2-3)WHVRP1



Units: mm

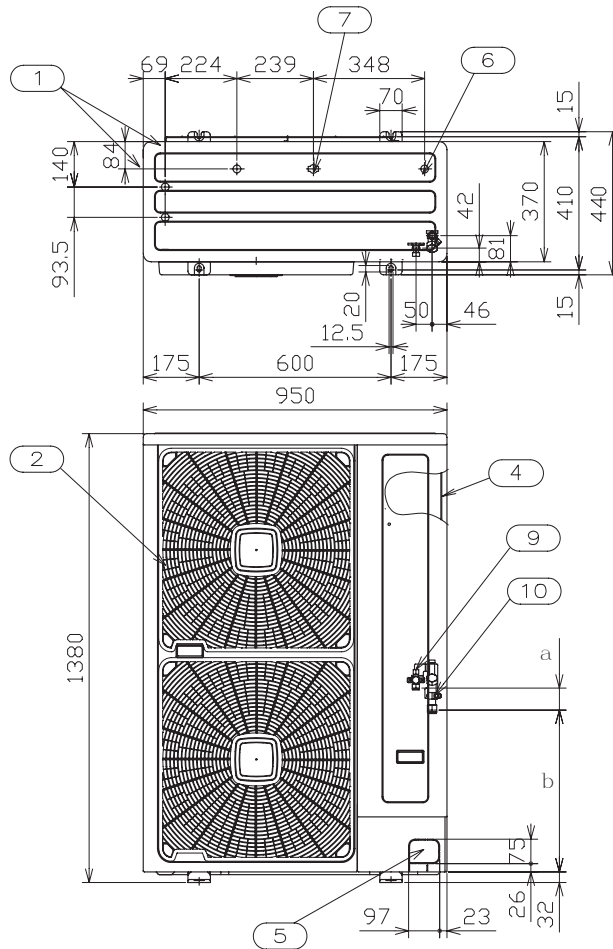


NOTE

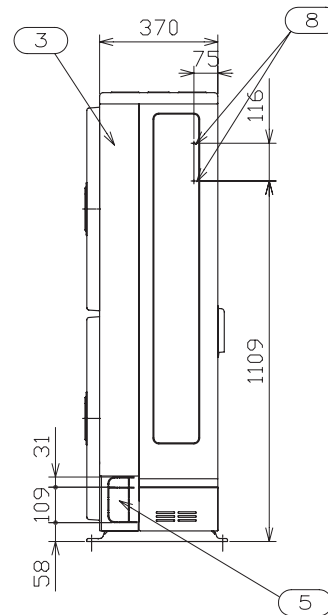
The dimensions with the * mark indicate the pitch dimension of the holes for attachment of anchor bolts.

Number	Description	Remarks
1	Punched drain hole for bush	30x80 long hole
2	Attachment hole for M10 anchor bolt	2-U cut hole
3	Air suction inlet	—
4	Punched drain hole	For drain pipe
5	Attachment hole for M10 anchor bolt	2-Long hole
6	Foot part	
7	Air discharge outlet	—
8	Pipe cover	—
9	Service cover	—
10	Terminal board for power supply and transmission Terminal screw of power supply wire (M5) Terminal screw of transmission wire (M4)	—
11	Terminal screw of earth wire (M5)	—
12	Connection of refrigerant liquid pipe	With flare nut for Øe copper pipe
13	Connection of refrigerant gas pipe	With flare nut for Ød copper pipe

◆ **RAS-(4-10)WH(V)NPE**



	4-6 HP	8 HP	10 HP
a	90	81	99
b	459	465	465



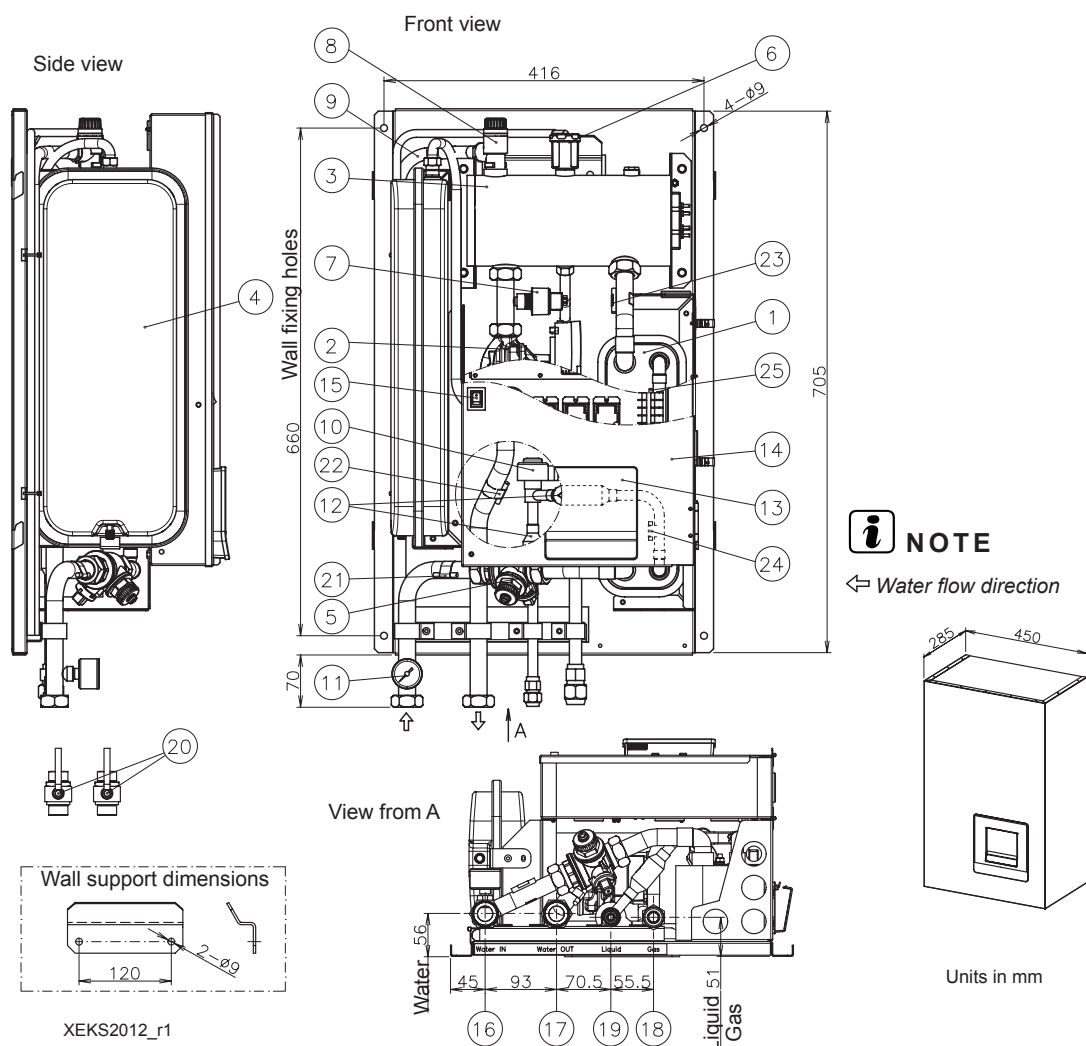
Units: mm

Number	Description	Remarks
1	Air inlet	—
2	Air outlet	—
3	Service cover	—
4	Electrical switch box	—
5	Holes for refrigerant piping and electrical wiring piping	—
6	Drain holes	3-Ø24
7	Drain holes	2-Ø26
8	Holes for fixing machine to wall	4-(M5)
9	Refrigerant liquid pipe	—
10	Refrigerant gas pipe	—

6.1.2 Split system - Indoor unit

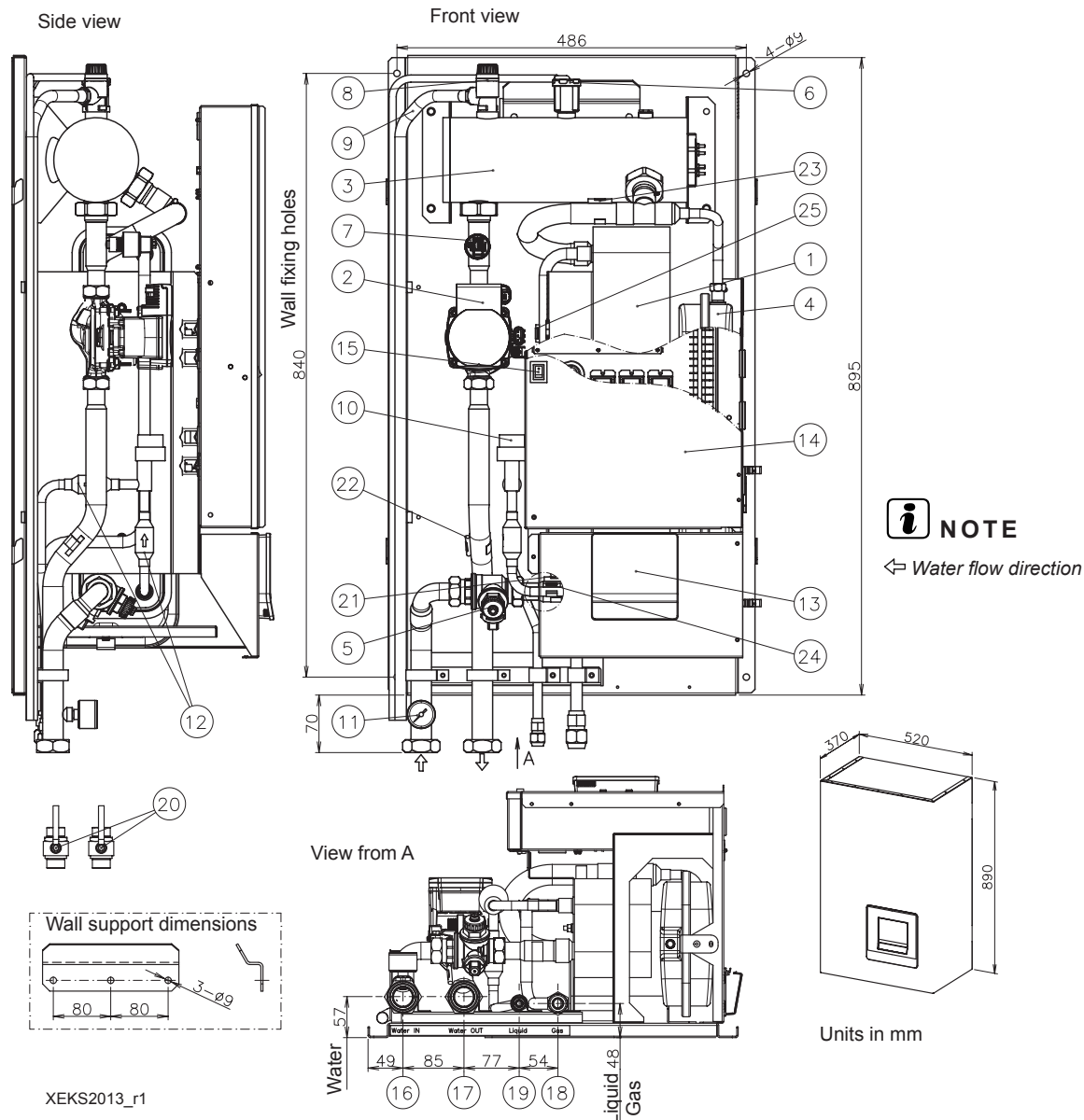
6.1.2.1 YUTAKI S

◆ RWM-(2.0-3.0)R1E



Number	Part name	Number	Part name
1	Plate heat exchanger	13	Unit controller
2	Water pump	14	Electrical box
3	Electric water heater	15	Switch for DHW emergency operation
4	Expansion vessel 6L	16	Water inlet pipe connection - G 1" Female
5	Water strainer	17	Water outlet pipe connection - G 1" Female
6	Air purger	18	Refrigerant gas pipe connection - $\varnothing 15.88$ (5/8")
7	Water pressure sensor	19	Refrigerant liquid pipe connection 2.0HP: $\varnothing 6.35$ (1/4") / (2.5-3.0)HP: $\varnothing 9.52$ (3/8")
8	Safety valve	20	Shut-down valve (Factory-supplied accessory)
9	Drain pipe for safety valve	21	Thermistor (Water inlet pipe)
10	Expansion valve	22	Thermistor (Water outlet pipe)
11	Manometer	23	Thermistor (Water outlet PHEX)
12	Refrigerant strainer (x2)	24	Thermistor (Liquid refrigerant pipe)
		25	Thermistor (Gas refrigerant pipe)

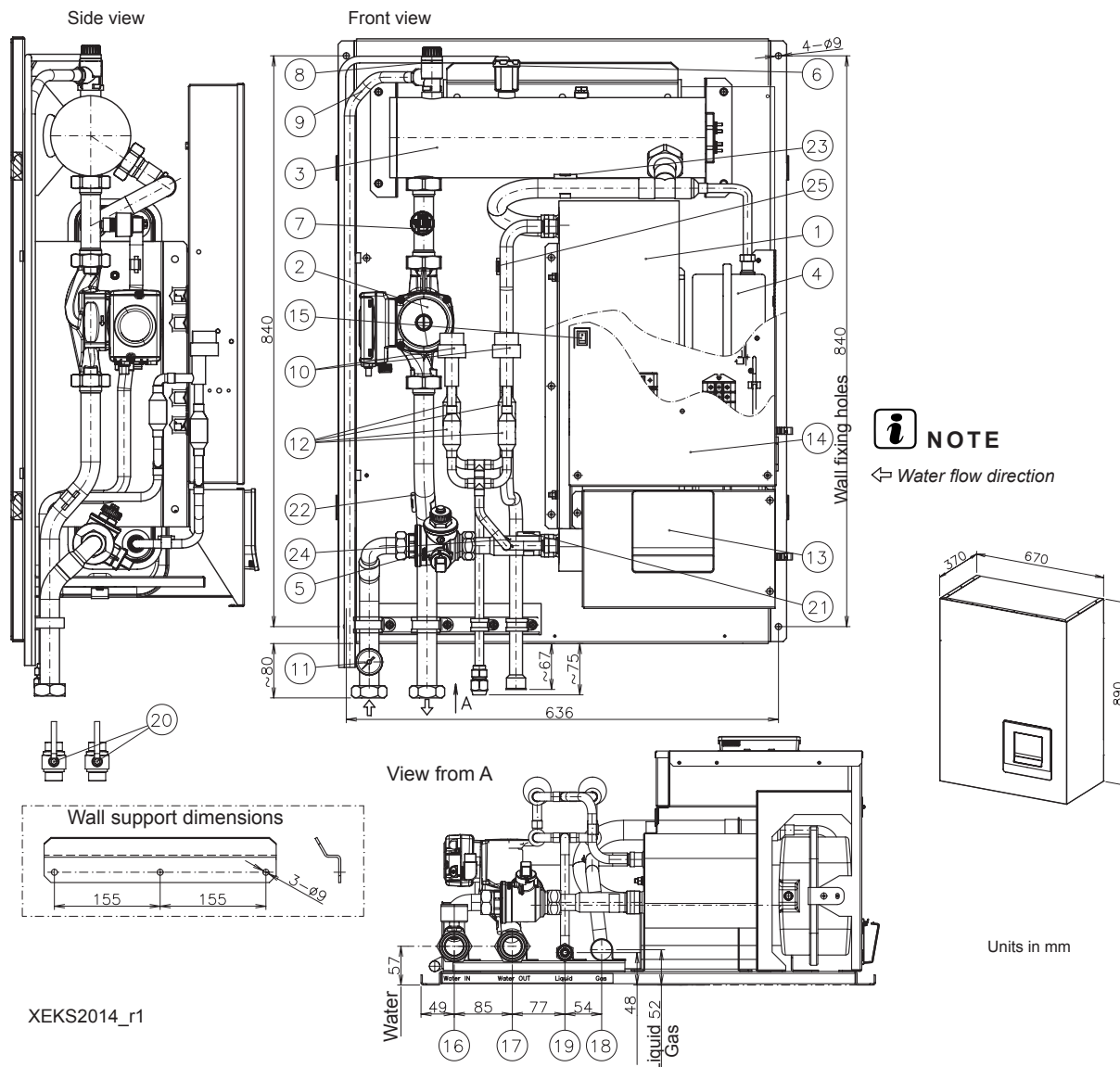
◆ RWM-(4.0-6.0)N1E



XEKS2013_r1

Number	Part name	Number	Part name
1	Plate heat exchanger	13	Unit controller
2	Water pump	14	Electrical box
3	Electric water heater	15	Switch for DHW emergency operation
4	Expansion vessel 6L	16	Water inlet pipe connection - G 1 1/4" female
5	Water strainer	17	Water outlet pipe connection - G 1 1/4" female
6	Air purger	18	Refrigerant gas pipe connection - Ø 15.88 (5/8")
7	Water pressure sensor	19	Refrigerant liquid pipe connection - Ø 9.52 (3/8")
8	Safety valve	20	Shut-down valve (Factory supplied accessory)
9	Drain pipe for safety valve	21	Thermistor (Water inlet pipe)
10	Expansion valve	22	Thermistor (Water outlet pipe)
11	Manometer	23	Thermistor (Water outlet PHEX)
12	Refrigerant strainer (x2)	24	Thermistor (Liquid refrigerant pipe)
		25	Thermistor (Gas refrigerant pipe)

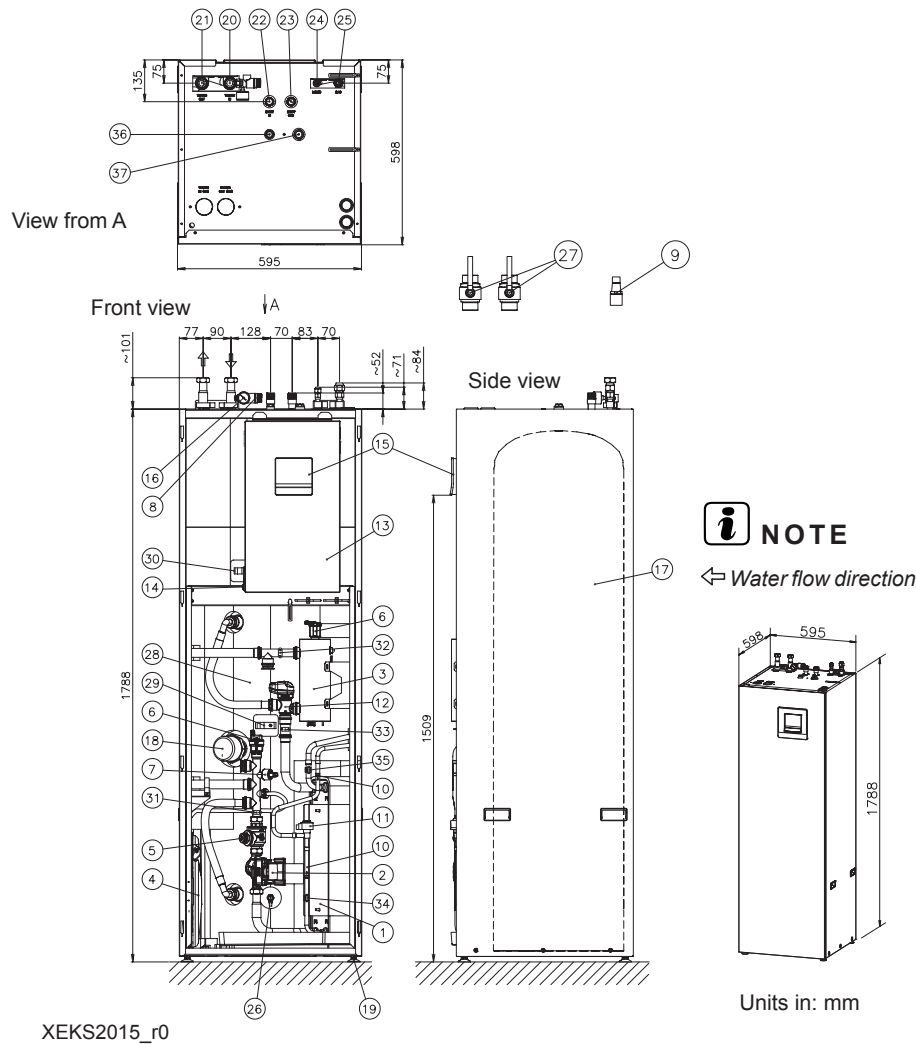
◆ RWM-(8.0-10.0)N1E



Number	Part name	Number	Part name
1	Plate heat exchanger	13	Unit controller
2	Water pump	14	Electrical box
3	Electric water heater	15	Switch for DHW emergency operation
4	Expansion vessel 10L	16	Water inlet pipe connection - G 1 1/4" Female
5	Water strainer	17	Water outlet pipe connection - G 1 1/4" Female
6	Air purger	18	Refrigerant gas pipe connection - Ø25.4 (1")
7	Water pressure sensor	19	Refrigerant liquid pipe connection 8HP: Ø9.52 (3/8") / 10HP: Ø12.7 (1/2")
8	Safety valve	20	Shut-down valve (factory-supplied accessory)
9	Drain pipe for safety valve	21	Thermistor (Water inlet pipe)
10	Expansion valve (x2)	22	Thermistor (Water outlet pipe)
11	Manometer	23	Thermistor (Water outlet PHEX)
12	Refrigerant strainer (x4)	24	Thermistor (Liquid refrigerant pipe)
		25	Thermistor (Gas refrigerant pipe)

6.1.2.2 YUTAKI S Combi

◆ RWD-(2.0-6.0)(N/R)W1E-220S(-K)



XEKS2015_r0

Number	Part name	Number	Part name
1	Plate heat exchanger	20	Water inlet pipe connection 2.0-6.0HP: G 1" female
2	Water pump	21	Water outlet pipe connection 2.0-6.0HP: G 1" female
3	Electric water heater	22	DHW inlet pipe connection - G 3/4" male
4	Expansion vessel 6L	23	DHW outlet pipe connection - G 3/4" male
5	Water strainer	24	Refrigerant liquid pipe connection 2.0HP: Ø 6.35 (1/4") / (2.5-6.0)HP: Ø9.52 (3/8")
6	Air purger (x2)	25	Refrigerant gas pipe connection - Ø15.88 (5/8")
7	Water pressure sensor	26	Drain port (For DHW) - G 3/8"
8	Safety valve	27	Shutdown valve (Factory supplied accessory)
9	Drain pipe for safety valve	28	Tank insulation
10	Refrigerant strainer (x2)	29	DHW thermistor 1
11	Expansion valve	30	DHW thermistor 2
12	3-way valve (for space heating and DHW)	31	Water inlet thermistor
13	Electrical box	32	Water outlet thermistor
14	Switch for DHW emergency operation	33	Water outlet PHEX thermistor
15	Unit controller	34	Refrigerant liquid pipe thermistor
16	Manometer	35	Refrigerant gas pipe thermistor
17	DHW tank (220L)	36	P&T Valve (Only UK Models)
18	DHW tank heater+thermostat	37	Anode connection (accessory)
19	Mounting foot (x4)		