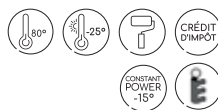


Yutaki S80

Up to 80°C start temperature without electric heating element



Smart Cascade regulation

The Yutaki S80 range features a Smart Cascade cycle, (unique on the market), which automatically adjusts Heat Pump operation based on heating requirements. This way, when heating requirements are less (water temperature until 53°C), the Heat Pump only uses the R410A refrigerant. When the requirement increases (water temperature up to 80°C), the second cycle of R134A refrigerant is activated. This way, consumption is reduced to a minimum and comfort is always guaranteed. (Fig. 1)

Modularity to adapt to each client's needs

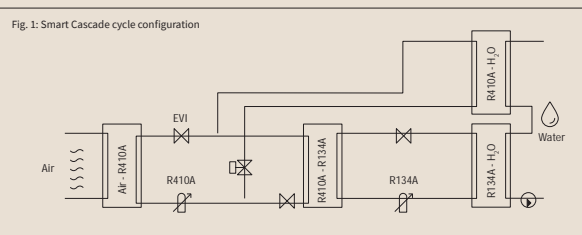
To meet all market requirements, the Yutaki S80 can add a separate tank of up to 3000L to meet domestic hot water requirements in multi-residence accommodation.

Constant heating all year round down to -25°C

This equipment heats water up to 80°C using renewable energy, including extreme temperatures down to -25°C.

Easy installation and maintenance

Its design means easy access to water and refrigerant connections and they are located in the upper part of the indoor unit.



Controls and controllers

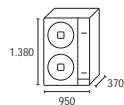
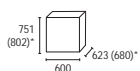
Wired controller
PC-ARFH1E
Pre-tax price:
Not included

Wireless controller
ATW-RTU-07
Pre-tax price:

Others*:
- 2nd zone kit with a 3-way valve and wall mounted circulator ATW-2TK-07
- Hi-Box AHP-SMB-01
- Hi Kumo gateway for Hi-Box ATW -TAG-02

* All prices are pre-tax

Indoor units Outdoor units



RWH-4.0V/NFE
RWH-5.0V/NFE
RWH-6.0V/NFE

RAS-4WH(V)/NPE
RAS-5WH(V)/NPE
RAS-6WH(V)/NPE

* with connections.

Yutaki S80

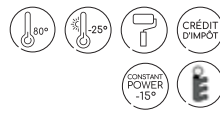
Model	FLUIDE R410A + R134A			
	YUTAKI S80 11KW	YUTAKI S80 14KW	YUTAKI S80 16KW	
Heating performances				
Min/nom./max capacity heating (7°C ext/35°C water)	kW	11/15.2	14/16.7	16/17.8
Nom./max capacity heating (-7°C ext/35°C water)	kW	9.7/10.6	11.5/12.2	12.1/13
Nom./max capacity heating (-7°C ext/45°C water)	kW	11/12.5	14/14.5	16/16
Nom./max capacity heating (-7°C ext/55°C water)	kW	11/12.5	14/14.5	16/16
Power consumption heating (7°C ext/35°C water)	kW	2.2	2.97	3.5
COP (7°C ext/35°C water) acc. to EN14511		5	4.71	4.57
SCOP medium climate 35°C/55°C acc. to EN14825		4.75/3.63	4.43/3.35	3.88/3.23
Seasonal energy efficiency heating ηs (35°C) Single/Three ⁽¹⁾	%	189/188	177/176	155/154
Seasonal energy efficiency heating ηs (55°C) Single/Three ⁽¹⁾	%	138/137	135/135	127/127
Energy class 35°C/55°C			A+++/A++	A++/A++
Water output temperature range (heating mode)	°C		20/80 °C	
Max. water output temperature	°C		80°C down to -20 °C ext	
Hydraulic modules				
Weight	kg	RWH-4.0V/NFE 135/137	RWH-5.0V/NFE 139/146	RWH-6.0V/NFE 139/146
Dimensions (HxWxD)	mm		751 x 600 x 623	
Sound pressure level	dB(A)	57	57	58
Controller		Not included		
Hydraulic specifications				
Expansion tank	L	12		
Water flow (min/nom/max)	m³/h	1/1.89/2.5	1.1/2.41/3.2	1.3/2.75/3.2
Heating hydraulic connections (male-male valves supplied)	inch	1" 1/4		
Minimum water volume for the installation	L	40	50	50
Refrigerant specifications				
Fluid		R134A		
Initial refrigerant charge pre-charged	kg	1.9 kg for 15m		
Compressor		SCROLL		
Electrical specifications				
Electrical power		230V/1Ph/50Hz or 400V/3Ph/50Hz		
SINGLE PHASE 230V	Max. current	A	24	31
	Cable diameter (mm²)/max. length (m)		28 3 x 6	
THREE PHASE 400V	Max. current	A	10	10
	Cable diameter (mm²)/max. length (m)		10 5 x 2.5	
Premium outdoor units				
Pressure level at 1m/Acoustic pressure heating mode	dB(A)	RAS-4WH(V)/NPE 49/61	RAS-5WH(V)/NPE 50/63	RAS-6WH(V)/NPE 50/64
Airflow	m³/h	4800	5400	6000
Dimensions (H x W x D)	mm	1380 x 950 x 370		
Weight	kg	103		
Operating ranges Heating/DHW	°C	-25/+25 // -25/+35		
Refrigerant specifications				
Refrigerant pipe diameter (Liq/gas)	inch	3/8" 5/8"		
Min max length/Max height difference	m	5 - 75/20		
Initial charge of pre-charged refrigerant/Additional charge	kg/g/m	3.3 for 15m/60		3.4 for 15m/60
Refrigerant		R410A		
Compressor		SCROLL		
Electrical specifications				
Electrical power		230V/1Ph/50Hz or 400V/3Ph/50Hz		
SINGLE PHASE 230V	Max. current	A	30.5	
	Cable diameter (mm²)/max. length (m)		3 x 6/30	
THREE PHASE 400V	Max. current	A	14	16
	Cable diameter (mm²)/max. length (m)		5 x 2.5/16	5 x 2.5/16
Int/Ext wiring section (shielded)	mm²	2 x 0.75		

⁽¹⁾ Seasonal energy efficiency with integrated controller(V) = single.

* For the 2/2.5/3HP models with R32, indoor units and outdoor units have different diameters of refrigerant gas pipes and refrigerant fluid pipes. Adapters are therefore supplied with the outdoor unit.

Yutaki S80 Combi

Up to 80°C start temperature without electric heating element for heating and DHW



Smart Cascade regulation

The Yutaki S80 range features a Smart Cascade cycle, (unique on the market), which automatically adjusts Heat Pump operation based on heating requirements. This way, when heating requirements are less (water temperature until 53°C), the Heat Pump only uses the R410A refrigerant. When the requirement increases (water temperature up to 80°C), the second cycle of R134A refrigerant is activated. This way, consumption is reduced to a minimum and comfort is always guaranteed. (Fig. 1)

Constant heating all year round down to -25°C

This equipment heats water up to 80°C using renewable energy, including extreme temperatures down to -25°C.

Easy installation and maintenance

Its design means easy access to water and refrigerant connections and they are located in the upper part of the indoor unit.

Fig. 1: Smart Cascade cycle configuration

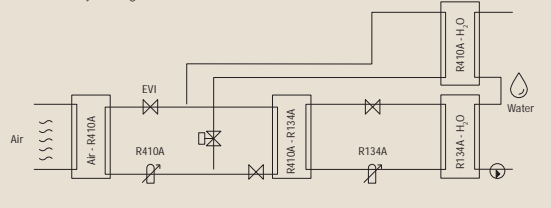


Fig. 2



Controls and controllers



Wired controller

PC-ARFH1E

Pre-tax price:

Included



Wireless controller

ATW-RTU-07

Pre-tax price:

Others*:

- 2nd zone kit with a 3-way valve and wall mounted circulator

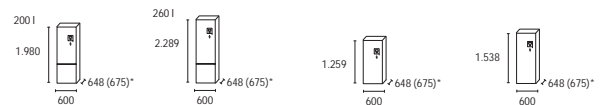
ATW-2TK-07

- Hi-Box AHP-SMB-01

- Hi Kumo gateway for Hi-Box ATW -TAG-02

* All prices are pre-tax

Indoor units



RWH-4.0(V)NFW
RWH-5.0(V)NFW
RWH-6.0(V)NFW

DHWS200S-2.7H2E

DHWS260S-2.7H2E

Outdoor units



RAS-4WH(V)NPE
RAS-5WH(V)NPE
RAS-6WH(V)NPE

* with connections.

Yutaki S80 Combi

Model	R410A + R134A			
	YUTAKI S80 COMBI 11KW	YUTAKI S80 COMBI 14KW	YUTAKI S80 COMBI 16KW	
Heating performances				
Min/nom./max capacity heating (7°C ext/35°C water)	kW	11/15.2	14/16.7	16/17.8
Nom./max capacity heating (-7°C ext/35°C water)	kW	9.7/10.6	11.5/12.2	12.1/13
Nom./max capacity heating (-7°C ext/55°C water)	kW	11/12.5	14/14.5	16/16
Power consumption heating (7°C ext/35°C water)	kW	2.2	2.97	3.5
COP (7°C ext/35°C water) acc. to EN14825		5	4.71	4.57
SCOP medium climate 35°C/55°C acc. to EN14825		4.75/3.63	4.43/3.35	3.88/3.23
Seasonal energy efficiency heating ηs (35°C) Single/Three ⁽¹⁾	%	189/188	177/176	155/154
Seasonal energy efficiency heating ηs (55°C) Single/Three ⁽¹⁾	%	138/137	135/135	127/127
Energy class 35°C/55°C			A+++/A++	A+++/A++
Water output temperature range (heating mode)	°C		20/80 °C	
Max. water output temperature	°C		80°C down to -20 °C ext	

DHW performances

Seasonal energy efficiency nwh (200L cycle L/260L cycle XL)	%		130/134	
DHW energy class			A+	
Water output temperature range (DHW mode)	°C		30/75 °C	

Hydraulic modules

		RWH-4.0VNFWE + DWHHS(200/260)S-2.7H2E	RWH-5.0VNFWE + DWHHS(200/260)S-2.7H2E	RWH-6.0VNFWE + DWHHS(200/260)S-2.7H2E
Single/Three-phase hydraulic module weight	kg	135/137	139/146	139/146
DHW tank weight (200L/260L)	kg		62/81	
Dimensions (HxWxD) with integrated DHW tank 200L /260L	mm		1980 x 600 x 648 // 2289 x 600 x 648	
Sound pressure level	dB(A)	57		58
DHW tank volume/DHW tank material	L		200 or 260 L/Stainless steel	
Controller			Included	

Hydraulic specifications

Expansion tank	L		12	
Water flow (min/nom/max)	m³/h	1/1.89/2.5	1.1/2.41/3.2	1.2/2.75/3.2
Hydraulic connections Heating (Male/male valves supplied)	inch		1"1/4 female	
Hydraulic connections DHW	inch		3/4" male	
Minimum water volume for the installation	L	40	50	50

Refrigerant specifications

Fluid			R134A	
Initial refrigerant charge pre-charged	kg		1.9 kg for 15m	
Compressor			SCROLL	

Electrical specifications

Electrical power			230V/1Ph/50Hz or 400V/3Ph/50Hz	
SINGLE-PHASE 230V	Max. current	A	30.5	
	Cable diameter (mm²)/max. length (m)		3 x 6/30	
THREE-PHASE 400V	Max. current	A	14	16
	Cable diameter (mm²)/max. length (m)		5 x 2.5/16	5 x 2.5/16

Premium outdoor units

		RAS-4WH(V)NPE	RAS-5WH(V)NPE	RAS-6WH(V)NPE
Pressure level at 1m/Acoustic pressure heating mode	dB(A)	49/61	50/63	50/64
Airflow	m³/h	4800	5400	6000
Dimensions (H x W x D)	mm		1380 x 950 x 370	
Weight	kg		103	
Operating ranges Heating/DHW	°C		-25 → +25 // -25 → +35	

Refrigerant specifications

Refrigerant pipe diameter (Liq/gas)	inch		3/8" 5/8"	
Min max length/Max height difference	m		5 - 75/20	
Initial charge of pre-charged refrigerant/Additional charge	kg/g/m	3.3 for 15m/60		3.4 for 15m/60
Refrigerant			R410A	
Compressor			SCROLL	

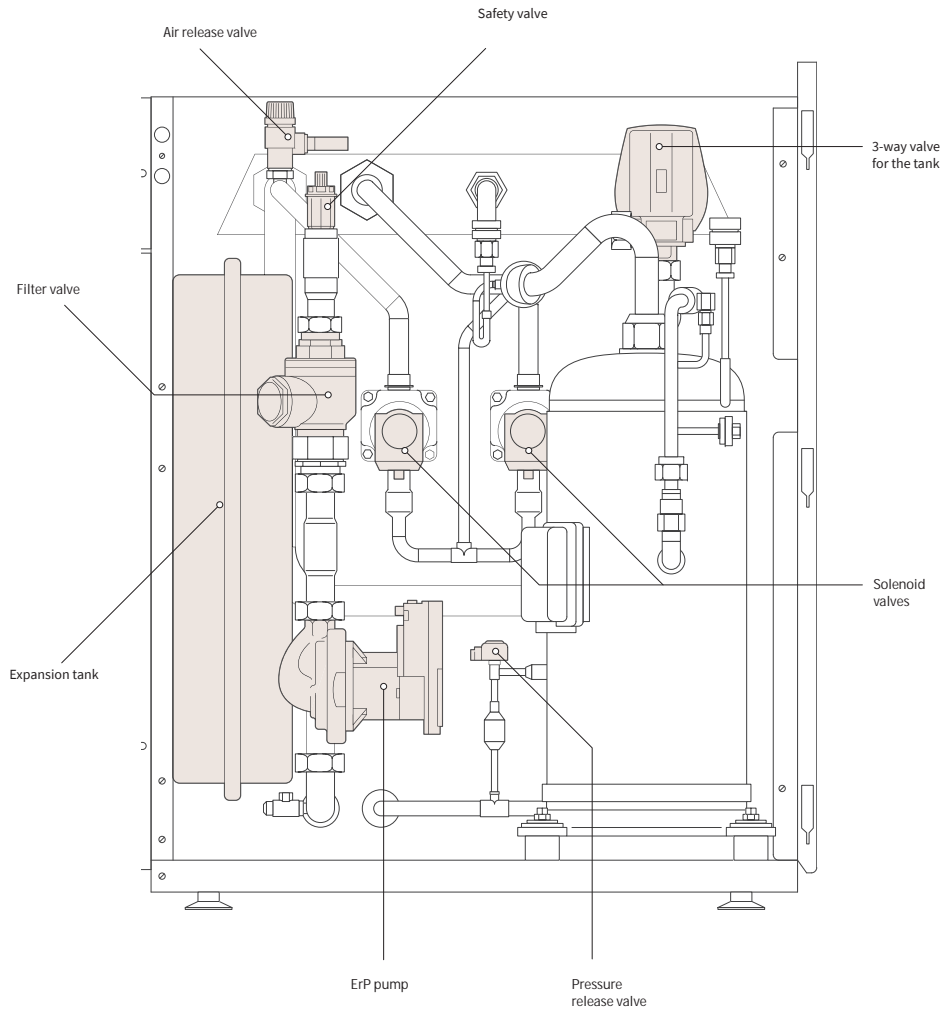
Electrical specifications

Electrical power			230V/1Ph/50Hz or 400V/3Ph/50Hz	
SINGLE-PHASE 230V	Max. current	A	30.5	
	Cable diameter (mm²)/max. length (m)		3 x 6/30	
THREE-PHASE 400V	Max. current	A	14	16
	Cable diameter (mm²)/max. length (m)		5 x 2.5/16	5 x 2.5/16
Int/Ext wiring section (shielded)	mm²		2 x 0.75	

⁽¹⁾ Seasonal energy efficiency with integrated controller(V) = single.

* For the 2/2.5/3HP models with R32, indoor units and outdoor units have different diameters of refrigerant gas pipes and refrigerant fluid pipes. Adapters are therefore supplied with the outdoor unit.

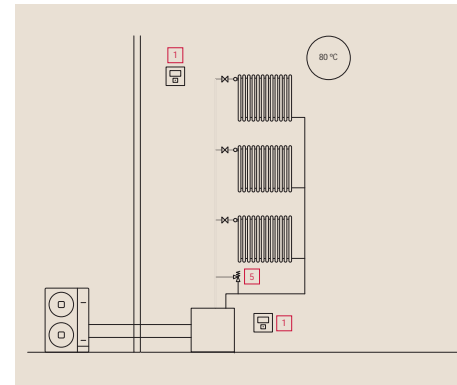
Internal design



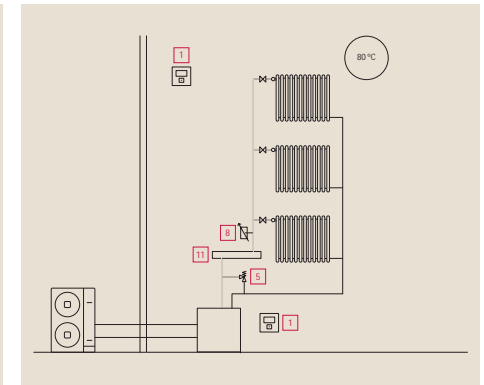
Its flexible design enables a variety of installation and pipe connection options.

- Hydraulic module
- Hydraulic module + Hitachi domestic hot water tank, integrated.
- Hydraulic module + Hitachi domestic hot water tank, lateral.
- Hydraulic module + domestic hot water tank from other manufacturers.

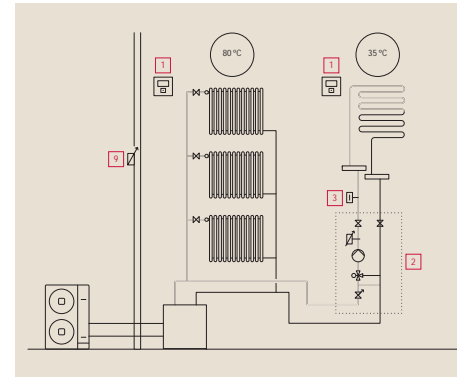
Hydraulic configurations Yutaki S80 and S80 Combi



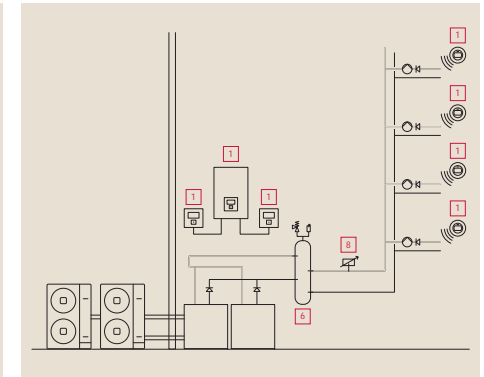
Boiler replacement
Heating 1 circuit



Boiler replacement
Heating 1 circuit



Boiler replacement
Heating 2 circuits



Boiler replacement
Cascade: individual central heating application

1 See P. 66 for the accessories.