Yutaki S80

Achieving water temperatures up to 80°C
without an electric backup heater

Smart Cascade controls

The Yutaki S80 range has a Smart Cascade cycle, (unique on the market), which automatically adjusts the heat pump's operation according to heating needs. In this way, when there's less need for heating (water temperature up to 53°C), the heat pump uses only the refrigerant R410A; and when this requirement increases (water temperature up to 80°C), the system activates the second cycle of the refrigerant R134A. This minimizes consumption and guarantees uninterrupted comfort. (Fig. 1)

Modular system to adapt to every customer requirement

Meeting all market needs, by adding a a separate tank as big as 3,000 litres to the Yutaki S80 range, the system can provide plenty of DHW to go around in shared residential buildings.

Year-round continuous heating up to -25°C

This equipment heats the water up to 80°C by using renewable energy, including to extreme temperatures as low as -25°C.

Easy to install and maintain

The design allows you to easily access water and refrigerant connections, as they are placed in the top part of the indoor unit.

Fig. 1: Smart Cascade cycle diagram

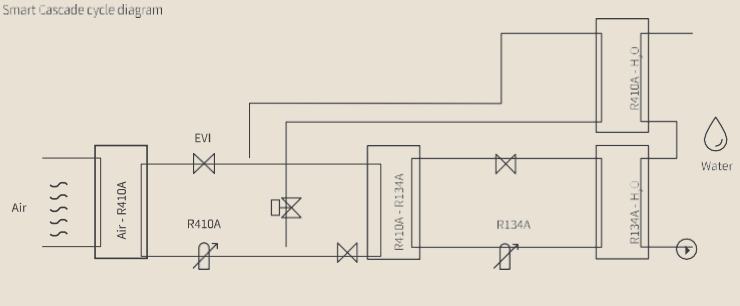
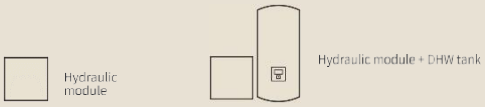


Fig. 2



controls and remote controls (see page 60)

Wired remote control

PC-ARFH1E

Not included

Wireless remote control

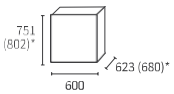
ATW-RTU-07

Other

- 2-zone kit with 3-way valve and wall-mounted diffuser pump
  ATW-2TK-07
- Hi-Box
  AHP-SMB-01
- Hi Kumo interface for Hi-Box
  ATW -TAG-02

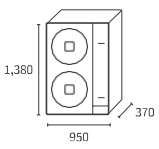
(for more, see p.42-43)

Indoor units



RWH-4.0VNFE
RWH-5.0VNFE
RWH-6.0VNFE

Outdoor units



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

* with connections.

Model			R410A + R134A REFRIGERANT		
			YUTAKI S80 11kW	YUTAKI S80 14kW	YUTAKI S80 16kW
Performance, heating					
Min./rated/max. heating capacity (7°C outside. / 35°C water)		kW	11 / 15.2	14 / 16.7	16 / 17.8
Rated/max. power heating (-7°C outside / 35°C water)		kW	9.7 / 10.6	11.5 / 12.2	12.1 / 13
Rated/max. power heating (-7°C outside / 45°C water)		kW	11 / 12.5	14 / 14.5	16 / 16
Rated/max. power heating (-7°C outside / 55°C water)		kW	11 / 12.5	14 / 14.5	16 / 16
Rated power input for heating (7°C outside / 35°C water)		kW	2.2	2.97	3.5
COP (7°C outside / 35°C water) in accordance with EN14511		-	5	4.71	4.57
SCOP average climate 35°C / 55°C in accordance with EN14825		-	4.75 / 3.63	4.43 / 3.35	3.88 / 3.23
Seasonal heating energy efficiency ηs (35°C) Single/Three[1]		%	187 / 183	174 / 171	152 / 150
Seasonal heating energy efficiency ηs (55°C) Single/Three[1]		%	142 / 140	131 / 129	126 / 125
Energy rating 35°C / 55°C		-	A+++ / A++		A++ / A++
Temperature range of water outlet (heating mode)		°C	20 / 80°C		
Max. temperature at the water outlet in thermodynamic-only mode		°C	80°C down to -20°C outside		
Indoor units			RWH-4(V)NFE	RWH-5(V)NFE	RWH-6(V)NFE
Net weight Single / Three phase		kg	135 / 137	139 / 146	139 / 146
Dimensions (H x L x D)		mm	751 x 600 x 623		
Sound power		dB(A)	57	57	58
Remote control		-	Not included		
Hydraulic features					
Expansion vessel		L	12		
Water flow (min / rated / max)		m³/h	1 / 1.89 / 2.8	1.1 / 2.41 / 3.2	1.2 / 2.75 / 3.2
Hydraulic heating connections (male/male valves supplied)		inches	1" 1/4		
Min. system water capacity		L	40	50	50
Refrigeration characteristics					
Refrigerant		-	R134A		
Refrigerant charge		kg	1.9		
Compressor		-	SCROLL		
Electrical features					
Power supply		-	230V / 1Ph / 50Hz or 400V / 3Ph / 50Hz		
SINGLE PHASE 230V	Fuse size	A	25	32	32
	Cable width (mm²) / max. length (m) [2]	-	3 x 6		
THREE PHASE 400V	Fuse size	A	10	10	10
	Cable width (mm²) / max. length (m) [2]	-	5 x 2.5		
Premium outdoor units			RAS-4WH(V)NPE	RAS-5WH(V)NPE	RAS-6WH(V)NPE
Sound pressure at 1m / Sound Power		dB(A)	49 / 61	50 / 63	50 / 64
Air flow rate		m³/h	4800	5400	6000
Dimensions (H x L x D)		mm	1380 x 950 x 370		
Net weight		kg	103		
Operating ranges for heating / DHW		°C	-25 / +25 // -25 / +35		
Refrigeration characteristics					
Diameter of refrigerant pipes (Liq - Gas)		inches	3/8" 5/8"		
Min./max. length / max. level difference		m	5 - 75 / 20		
Initial pre-charged refrigerant / Additional load		kg / g / m	3.3 for 15m / 60	3.4 for 15m / 60	
Refrigerant		-	R410A		
Compressor		-	SCROLL		
Electrical features					
Power supply		-	230V / 1Ph / 50Hz or 400V / 3Ph / 50Hz		
SINGLE PHASE 230V	Fuse size	A	32		
	Cable width (mm²) / max. length (m) [2]	-	3 x 10 / 30		
THREE PHASE 400V	Fuse size	A	16		
	Cable width (mm²) / max. length (m) [2]	-	5 x 4 / 16		
Int./Ext. connection (shielded)		mm²	2 x 0.75		

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