YUTAKI S80

COMFORT & PERFORMANCE

OUTDOOR UNIT
RAS 4-6HVRNME AF

INDOOR UNIT
RWH 4.0-6.0FS(V)NFE

COP 4.36

The Yutaki S80 high temperature heat pump is the ideal solution for replacing boilers. It suits all existing installations and provides heating and domestic hot water.

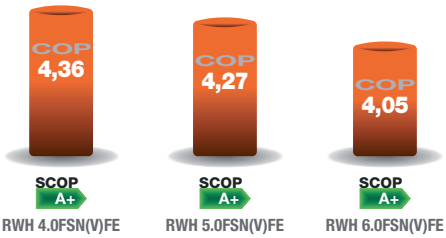
Domestic Heating

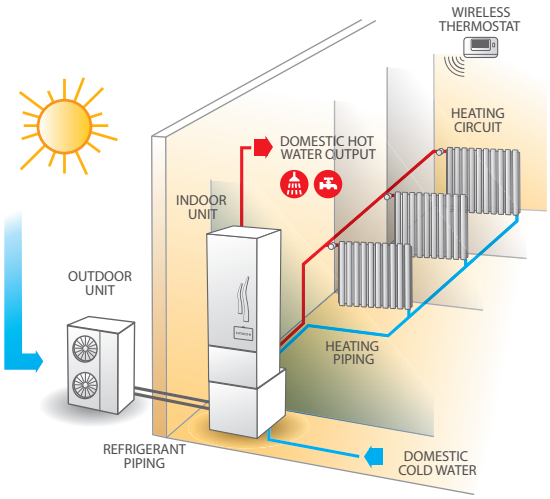
Ideal solution for boiler replacement

The YUTAKI S80 heat pump is able to produce hot water at 80°C with -20°C outdoor temperature (without supplementary power supply), it is thus ideal for the refurbishment market and adapts to all types of existing installation.

One of the best COP on the Market

YUTAKI S80 has one of the best COP on the Market: 4.36 (RWH 4.0FSVNFE - conditions 7°C/35°C). Its unique design allows it to maintain high performance year-round with extremely high SCOP (seasonal COP)





Wide Power

The wide range of Yutaki S80 can address all heating and domestic hot water production needs in the residential market (refurbishment + new build).

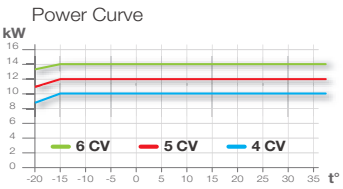
SINGLE PHASE / THREE PHASE RANGES

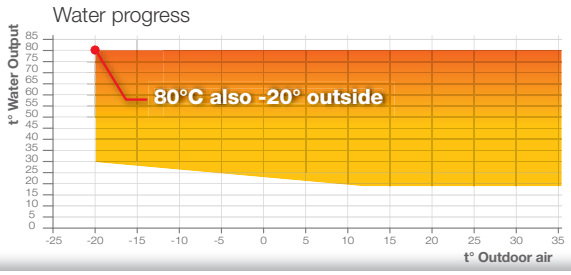
Constant Power

CONSTANT power Jusqu'à -15°C extérieur

Power and output temperatures are maintained

YUTAKI S80 assures the utmost comfort in the most demanding conditions. Its unique design allows it to maintain its nominal Power and Produce hot water at 80 °C even with outdoor temperature at -20 °C.





Complete adjustment

Complete adjustment

. HP operation only or combined with a Boiler
. Water output adjustment on 2 heating zones (panel + radiators)
. Control Timer for DHW production, and Wireless Ambient Thermostat
. Pricing contact for Functions linked to differentiated pricing control
. Swimming pool heating

RADIO THERMOSTAT «ACCESSORY»

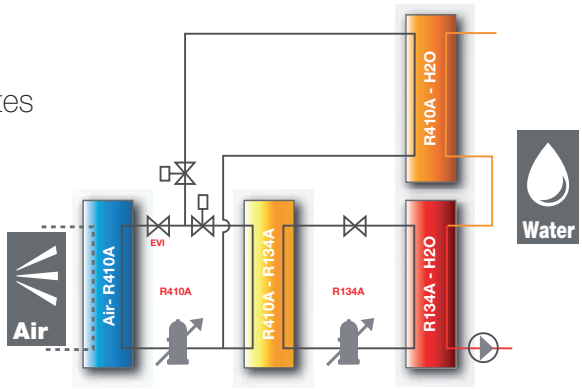
CONTROL

Easy maintenance

Yutaki S80 has been designed to make the professional's work easier (installation + maintenance). All main components are accessible from the front. For instance, the electrical panel may be easily removed.

Smart cascade: Hitachi's intelligent adjustment

« SMART CASCADE » Hitachi is a unique and intelligent concept which optimises heat pump efficiency. Depending on a number of parameters, the controller decides whether one or both compressors should operate. This translates into considerable energy savings.



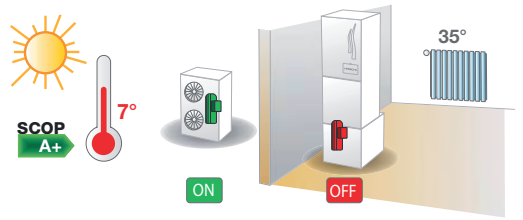
"SMART CASCADE" basic diagram

Exclusive adjustment system

YUTAKI S80 has an "intelligent" control able to adapt its operation (with R410A refrigerant cycle or using the second R134A refrigerant stage) by using an algorithm that takes into account: the outdoor temperature condition (heating and/or domestic hot water), performance optimisation and defrosting cycles.

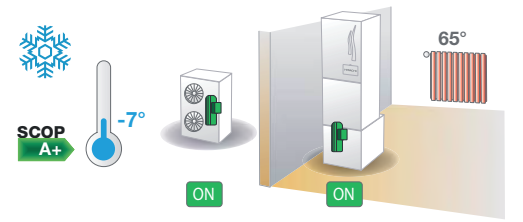
High yearly performance

During less cold periods (e.g. mid-season) or when heating requirements are lower, Yutaki-S 80 adapts its operation to optimise its performance.
The second refrigerant stage is thus by-passed, and hot water production is thus assured through the first refrigerant stage, avoiding useless simultaneous operation of two compressors to the advantage of better seasonal energy efficiency.



Operation with mild outside temperature!

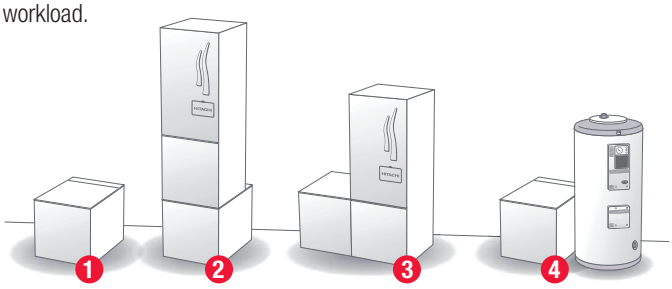
During very cold periods (e.g. in the middle of winter) or when heating requirements are high, Yutaki-S 80 adapts its operation to optimise its performance.
The By-pass of the first stage is then closed and the second refrigerant stage is activated, thus satisfying the requirement for high temperature hot water production.



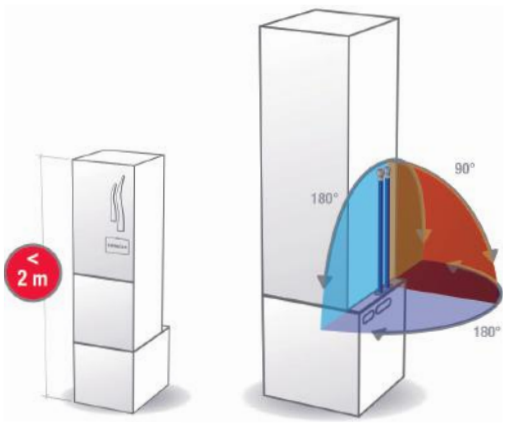
Operation with verylowoutside temperature!

Easy installation

YUTAKI S80 has standard dimensions (l x D: 595 x 695 mm) to easily integrate in all types of homes. When it is installed underneath the DHW module, YUTAKI S80 is in any case shorter than 2 m (mod. 195L). Plumbing connections with standard supplied flexible hoses, designed to reduce and aid the installer's workload.



❶ Hydraulic Module (Heating Only).
❷ Hydraulic Module (Heating + DHW on top).
❸ Hydraulic Module (Heating + DHW next to it).
❹ Hydraulic Module (Heating + DHW standard).



80°C HOT ONLY DC INVERTER R-410A

Yutaki S80

- High temperature water production

80°C

- New Hitachi Intelligent Adjustment.

Smart CASCADE
Il controllo Intelligente Hitachi

- One of the best COP on the market: 4.36
  The choice of an Economical solution.

KNX

- BMS Control option via Konnex with specific interface.

CONSTANT power
Jusqu'à -15°C extérieur

- Power is maintained constant even at temperature of -15°C. For optimal comfort throughout the winter operation period.

DOMOTICA COMPATIBILE somfy

"OPTIONAL" WIRELESS THERMOSTAT

PC-S80TE CONTROL

Guaranteed Hot Water Up to -20°C

RAS 4-6H(V)RNME AF

Indoor Unit

	REF.	RWH 4.0FSVNFE	RWH 5.0FSVNFE	RWH 6.0FSVNFE	RWH 4.0FSNFE	RWH 5.0FSNFE	RWH 6.0FSNFE
Max power (7°C ext / 35°C water)	kW	**13.50**	**16.00**	**18.00**	**13.50**	**16.00**	**18.00**
Max power (-7°C ext / 65°C water)	kW	**11.00**	**14.00**	**16.00**	**11.00**	**14.00**	**16.00**
Nom power (7°C ext / 35°C water)	kW	**10.00**	**12.00**	**14.00**	**10.00**	**12.00**	**14.00**
Nom power (-7°C ext / 65°C water)	kW	**10.00**	**12.00**	**14.00**	**10.00**	**12.00**	**14.00**
Nom power (-15°C ext / 65°C water)	kW	**10.00**	**12.00**	**14.00**	**10.00**	**12.00**	**14.00**
Min power (7°C ext / 35°C water)	kW	**4.50**	**5.50**	**6.00**	**4.50**	**5.50**	**6.00**
Weight	kg	157	162	162	162	167	167
Dimensions (H x L x P)	mm	706 × 595 × 695					
Noise Pressure Level	dB(A)	39	41	41	39	41	41
Sound Power Level	dB(A)	55	57	57	55	57	57
Expansion vessel	L	12					
Nominal water flow rate	m^3/h	1.70	2.10	2.40	1.70	2.10	2.40
Minimum water flow rate	m^3/h	1.00	1.10	1.20	1.00	1.10	1.20
Maximum water flow rate	m^3/h	2.90	3.10	3.10	2.90	3.10	3.10
Minimum water content in the system	L	40	50	50	40	50	50
Maximum Current	A	32			15		
Hydraulic Connections	mm	G 1"					
Water output temperature range	°C	20°C / 80°C					
Power Supply	V	230V / 1Ph / 50Hz			400V / 3Ph / 50Hz		
R-134A Refrigerant Charge	kg	2.5					
Compressor		**SCROLL**					
Yutaki S80 Control Panel		PC-S80TE (available as accessory, if the DHW Tank kit is not installed Code DHWS 195S-2.0H1E & DHWS 260S-2.0H1E)					

INDOOR UNITS							
Heat Only Unit Model	**MOD.**	**RWH 4.0FSVNFE**	**RWH 5.0FSVNFE**	**RWH 6.0FSVNFE**	**RWH 4.0FSNFE**	**RWH 5.0FSNFE**	**RWH 6.0FSNFE**
Price		**8,384**	**9,067**	**9,875**	**9,330**	**9,920**	**10,992**

Outdoor Unit

	MOD.	RAS 4H(V)RNME-AF	RAS 5H(V)RNME-AF	RAS 6H(V)RNME-AF
COP [1]		**4.36**	**4.27**	**4.05**
Noise pressure level (Sound power level) [2]	dB(A)	44 (65)	46 (67)	48 (69)
Dimensions (H × L × l)	mm	1380 × 950 × 370		
Weight (single / three phase)	kg	103 / 107	104 / 108	
Power Supply		230V / 1Ph / 50Hz - 400V / 3Ph + N / 50Hz		
Max Current (1Ph)	A	18	26	
Max Current (3Ph)	A	7	11	13
Refrigerant piping diameter (Liq-Gas)	Inches	3/8 - 5/8"		
Piping Length / Max Lift	m	30 / 20		
Pre-charge (standard length)	m	30 (3)		
Operating range	°C	**Cooling: 10°C BS / +46°C BS - Heating: -20°C BU / 35°C BU**		
Type of Refrigerant Gas		**R410A**		
Type of Compressor		**SCROLL**		

1. The nominal cooling and heating capacity represent the combined capacity of the Hitachi YUTAKI-S80 system and are based on the EN14511 Standard.

(*): The test is performed based on flow obtained during the test of standard nominal conditions.

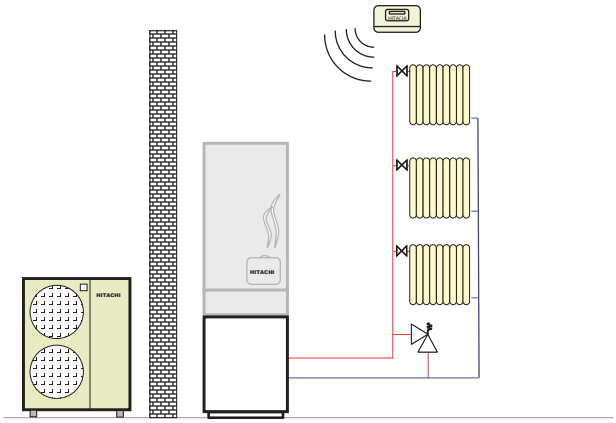
2. The sound pressure level is based on the following conditions:
At 1 metre distance from the unit's front surface. Mains power supply voltage 400V-230V. The above data have been measured in an anechoic chamber. See table above for Cooling/Heating conditions.

OUTDOOR UNITS				
Outdoor Unit Model	**SINGLE PHASE**	**RAS 4HVRNME AF**	**RAS 5HVRNME AF**	**RAS 6HVRNME AF**
Price		**2,820**	**3,116**	**3,466**
Outdoor Unit Model	**THREE PHASE**	**RAS 4HRNME AF**	**RAS 5HRNME AF**	**RAS 6HRNME AF**
Price		**2,968**	**3,360**	**3,731**

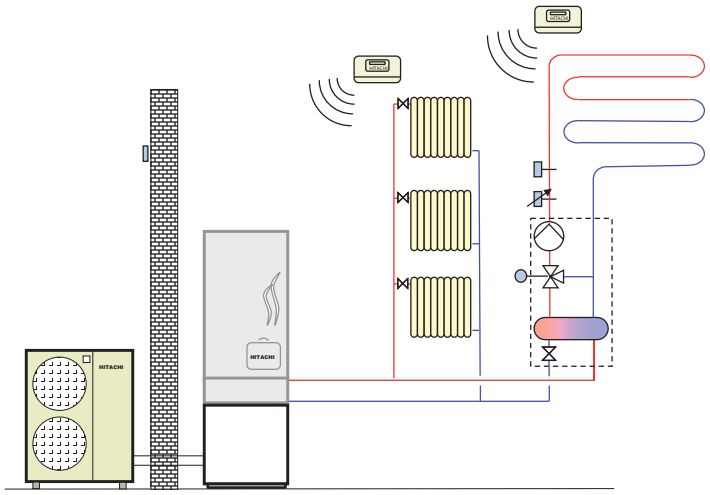
Compulsory First Start-up by HITACHI Service		SEE DESCRIPTION OF THE START-UP SERVICE IN THE ACCESSORIES PAGE
NET PRICE PER SYSTEM	€	**200**

Yutaki S80

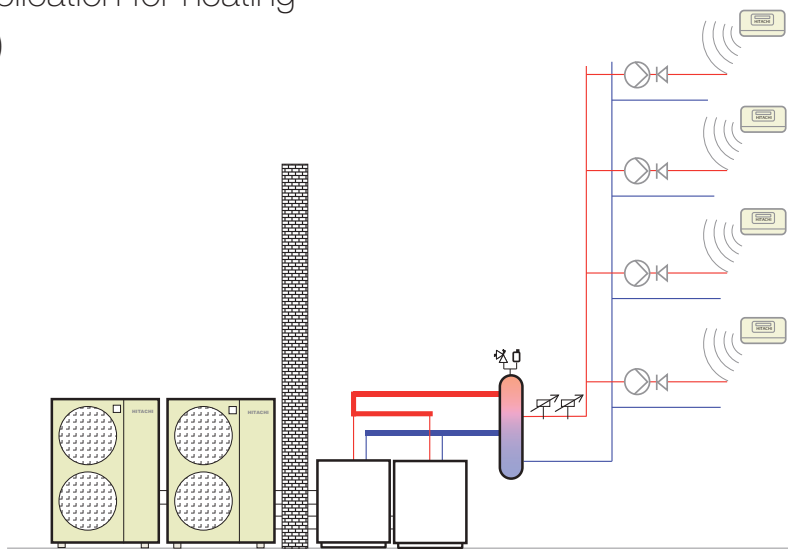
Application for domestic hot water production and heating with **1 circuit**



Application for domestic hot water production and heating with **2 circuits**



Modular centralised application for heating
(with and without DHW)



Yutaki-S80Accessories

Domestic hot water

DHW STORAGE TANK (For installation on top or next to YUTAKI-S80)			DHWS 195S 2.0H1E	DHWS 260S 2.0H1E
Domestic Hot Water Volume		L.	**185**	**250**
Storage tank material		-	AISI 444	
Insulating Material			NEOPRENE Thickness 50mm	
Storage Tank Dimensions alone (H x L x l)		mm	1272 x 595 x 600	1602 x 595 x 600
Storage Tank Dimensions if on top of Yutaki S80 Module (H x L x l)		mm	1940 x 595 x 600	2270 x 595 x 600
Empty weight		kg	72	87
Colour		-	RAL 9016 White	
Exchange coil surface		m²	1.4	
Immersed Electrical Heater		kW	2.0	
DHW Temperature Probe			Included (Code ATW-WTS 02Y)	
Hydraulic Connections	In / Out DHW	Inches	3/4" (Gas / M)	
	Coil In / Out	Inches	3/4" (Gas / M)	
Yutaki S80 Control Panel		-	PC-S80TE *(Already Included and installed in the DHW storage tank panel)*	
PRICE		€	2,736	3,011

DHW STORAGE TANK (Standard)		CODE	DHWT200E - 2.5H1E	DHWT300E - 2.5H1E	DHWT200S - 2.5H1E	DHWT300S - 2.5H1E
Domestic Hot Water Storage Tank	Water Volume	Litres	200	300	195	287
	Material		Internally Vitrified Steel (DIN 4753)		Stainless Steel (DIN 14521)	
	Temp. Max. Steel	°C	90	90	90	90
	Max. Pressure	bar	8	8	8	8
Dimensions and Weights	Height	mm	1205	1685	1205	1685
	Length	mm	620	620	620	620
	Depth	mm	620	620	620	620
	Weight	kg	85	130	60	85
Heat Exchanger	Temp. Max. Coil	°C	200	200	200	200
	Max. Pressure Coil	bar	25	25	25	25
	Surf. Exchanger	m²	2.40	3.10	1.10	1.40
Insulation type	Polyurethane	mm	50			
Auxiliary Heater	Power	kW	2.50	2.50	2.50	2.50
	Power supply	V	220V 1Ph			
Hydraulic Connection	In. DHW	in.	Ø1" m	Ø1" m	Ø1" m	Ø1" m
	Out. DHW	in.	Ø1" m	Ø1" m	Ø1" m	Ø1" m
	REC. DHW	in.	Ø1" m	Ø1" m	Ø1" m	Ø1" m
	In. Coil Water	in.	Ø1" f	Ø1" f	Ø1" f	Ø1" f
	Out. Coil Water	in.	Ø1" f	Ø1" f	Ø1" f	Ø1" f
Included Accessories	Thermometer		YES			
	Safety Thermostat		YES			
	DHW Temperature Probe		SI (ATW-WTS 02Y)			
Protection	Standard		With Magnesium anode		NO	
	Optional with accessory		DHWT-CP-01 (permanent catode)	DHWT-CP-03 (permanent catode)	DHWT-CP-02 (permanent catode)	DHWT-CP-04 (permanent catode)
PRICE			2,260	2,855	2,939	3,788

YUTAKI-S80Accessories

DESCRIPTION OF FIRST START-UP SERVICE (COMPULSORY)	

Operations performed by Hitachi TS:
Checking Vacuum of refrigerant piping and opening Gas R410A Piping Cocks. Checking correct Hydraulic Circuiting of the YUTAKI-S80 system according to Hitachi specifications.
Checking Correct wiring and checking safety device tripping. Checking correct water flow. Setting operation parameters based on design requirements.
Filling in the First Start-up form and providing useful operation information to the customer.

Operations performed by the installer:
Complete connection of refrigerant piping between outdoor unit and indoor module. Leakage test of the refrigerant piping with nitrogen pressurisation and vacuum operation (according to Hitachi Technical specifications). Full hydraulic system charge. Performing all wiring connections between Yutaki-S80 and installed accessories.

NET PRICE	200

DHW Storage Tank Separator

This accessory is a safety valve to protect the DHW storage tank from over-pressure

- Drainage pan siphon
- With 3/4 " shut-off valve

CODE	DHWT-SWG-01
PRICE	119

Fixed cathode protection

- Type single-phase 220V
- DHWT-CP-01 200l Vitrified Tank.
- DHWT-CP-02 200lt Steel Tank.
- DHWT-CP-03 300l Vitrified Tank.
- DHWT-CP-04 200l Steel Tank.

CODE	DHWT-CP-01	DHWT-CP-02	DHWT-CP-03	DHWT-CP-04
PRICE	120	577	408	832

3-Way valve

3-Way diverter valve (Type 1) with **Internal thread**, **spring return** and 220V voltage. (for DHW or Swimming Pool)

CODE	ATW-3WV-01
PRICE	186

3-Way valve

3-Way diverter valve (Type 2) with **external thread**, electrical return and 220V voltage. (for DHW or Swimming Pool)

CODE	ATW-3WV-02
PRICE	190

Water temperature sensor

Universal temperature sensor (DHW Storage Tank, Boiler combination (THMwo3), 2nd mixed zone (THMwo2)
Contact the Area Agency for correct selection.

CODE	ATW-WTS 02Y
PRICE	76

Water temperature sensor

Water temperature sensor (2nd Mixed Zone and Boiler Combination)

CODE	ATW-WTS 02
PRICE	91

ATW-FWP-01

Kit - Flexible hose extension and connecting electrical cable extension to install the DHW storage tank (DHWS 260S-2.0H1E; DHWS 195S-2.0H1E) next to the Yutaki-S80 module

CODE	ATW-FWP-01
PRICE	285

Yutaki S80 Control Panel

LCD Control Panel for YUTAKI S80 **OBLIGATORY** in applications where no DHWS 195S-2.0H1E or DHWS 260S-2.0H1E DHW tanks are provided.

CODE	PC-S80TE
PRICE	285

"Intelligent" Thermostat

Kit consisting of WIRELESS ambient thermostat and radio receiver to control one Zone.

CODE	ATW-RTU-02
PRICE	467

"Intelligent 2nd Zone" Thermostat

Thermostat to control the second Zone (thermostat only)
*It can only be combined with a system fitted with "Intelligent ATW-RTU-02" thermostat

CODE	ATW-RTU-03
PRICE	271

Note Please contact the head office or area agency regarding compatibility of the various products

YUTAKI-S80 Accessories

BMS KONNEX Interface

With the Konnex Interface, operation settings can be controlled also remotely. It is easily matched to the KNX protocol.

CODE	ATW-KNX-01
PRICE	449

ON-OFF Thermostat

KIT consisting of WIRELESS ambient thermostat and radio receiver to control one Zone.

CODE	ATW-RTU-01
PRICE	374

Outer temperature sensor

To be used to take the ambient temperature in a different place from the outdoor unit's position. (Optional)

CODE	ATW-2OS 01
PRICE	366

Swimming Pool temperature sensor

To be used to control the temperature of a Swimming Pool (Optional)

CODE	ATW-SPS 01
PRICE	370

Signal container of auxiliary outputs

RELAY box FOR ADDITIONAL OUTPUT SIGNALS: Alarm; ON Status; Cold Status; Direct Zone Valve Control

CODE	ATW-AOS 01
PRICE	366

Servomotor for 2nd temperature Kit

it is required in the kit to control the 2nd mixed temperature
Code: ATW-2KT-02

CODE	ATW-MVM 01
PRICE	311

2nd temperature Kit

Temperature Mixing Kit to control 2nd ERP Zone.
It must be used together with Servomotor code ATW-MVM01 and 2nd mixed Zone sensor

CODE	ATW-2KT 02
PRICE	1396

Heater

Type 6 kW Single/Three-phase
3 Control stages
Internal power relays
External insulation
Body in insulated steel

CODE	WEH-6E
PRICE	841

Hydraulic separator

it is required to hydraulically separate the YUTAKI-S circuit

- Stainless
- 4 connection ways
- Insulated

CODE	ATW-HSK-01
PRICE	443

Differential By-pass Valve

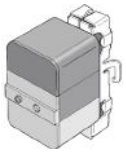
AUTOMATIC DIFFERENTIAL BYPASS Pressure Valve with D 3/4" flow gauge.

CODE	ATW DPOV-01
PRICE	120

Outdoor Unit Accessory

Condensate drain fitting.

Outdoor unit in HP	Power	QUANTITY	Power	QUANTITY
	2HP	1	3-6 HP	1
			8-10 HP	2
CODE	DBS 12L		DBS 26	
PRICE	25		25	



Safety Thermostat

Radiating Zone Maximum Output temperature Safety Thermostat to interrupt radiating zone water circulation.

CODE	ATW AQT-01
PRICE	183

Note Please contact the head office or area agency regarding compatibility of the various products