



Creating a Life Conditioner

AIR TO WATER

AIR TO WATER

Residential

GENERAL inc.

ОФИЦИАЛЕН ВНОСИТЕЛ БУЛКЛИМА ЕООД
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Residential

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AIR TO WATER

Residential

AIR TO WATER Overview

Solutions That Meet a Variety of Needs

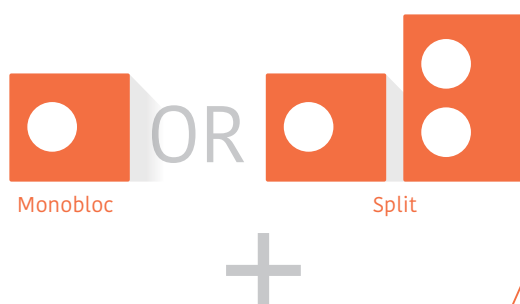
Water heated by Air to Water, which uses clean energy, can provide a steady supply of comfortable water throughout the home for heating and hot water applications.



Air-to-Water Heat Pump

Outdoor unit

The unit is used to extract heat from the environment, making use of renewable energy resources from the sun and the outside air.



Indoor unit control box*

If you want to update your system by reusing your existing pump and buffer tank, etc., you can do so by installing only the control box.

OR



Indoor unit Wall-mounted

Stands for preparation of heating water for under floor heating and radiators. It can optionally operate with domestic hot water tank.

OR

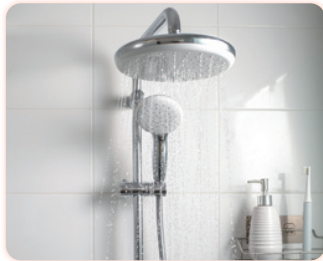


Indoor unit Domestic Hot Water integrated

Can be used with a variety of heating systems, including under floor heating and radiators. Space saving heating and DHW supply in a single indoor unit.

*The control box can only be selected for Monobloc outdoor unit.

Bedroom & Bathroom



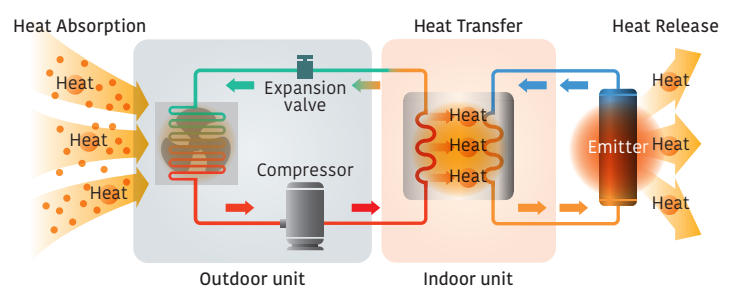
Living & Dining Kitchen



Ecological Consideration in Your Home

Heat pump system framework

Heat is absorbed from the atmosphere by expanding the refrigerant. Higher-temperature heat is generated by compressing the refrigerant, and the indoor unit transfers that heat to the water.



*Split products are listed as examples.

Things We can Contribute to

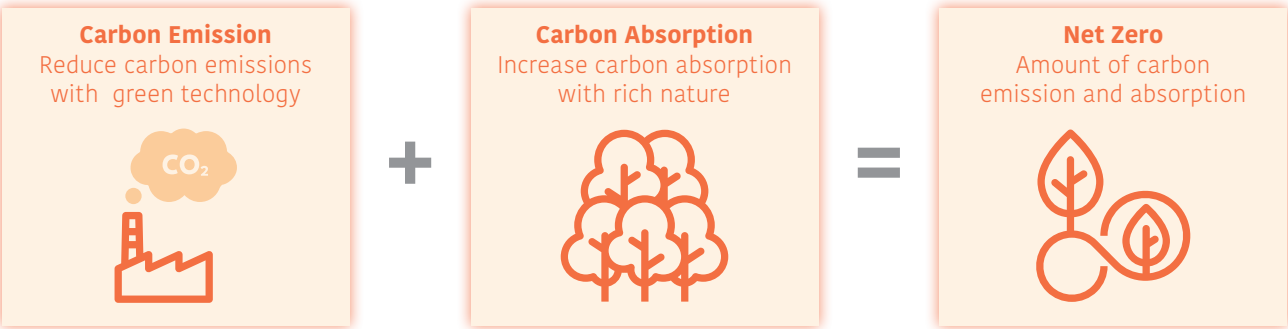


Our Goal

Decarbonisation

European Comission is committed to decarbonisation and has a national target of “**Net Zero**” carbon emissions by 2050.

We need to reduce carbon emissions with green technology products and increase carbon absorption by working to extend nature.



Fujitsu General’s ATW system will provide the best solutions that are friendly to the environment and people with products conscious of decarbonisation.

What is a heat pump?

A heat pump extracts heat energy from the atmosphere. It requires only 1 kW of electricity to generate 3 to 5 kW of thermal energy.

The diagram shows a heat pump unit extracting heat from the atmosphere (represented by a sun and a house icon). It takes 1 kWh of electricity and 2 to 4 kWh of ambient air to produce 3 to 5 kWh of heat for comfortable heating.

Primary energy usage reduced substantially

Proportion of primary energy converted into heating energy is 100%

Primary Energy Consumption*	Percentage
Direct electrical heating	278%
Fuel boiler	117%
Gas condensing boiler	109%
Air to water	79%

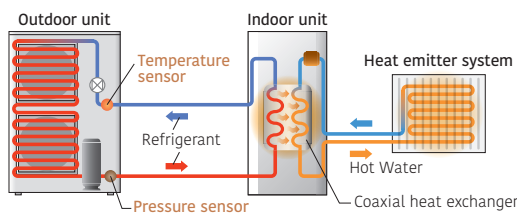
Energy heating 100%

* The amount of electricity loss varies according to the power plant. Typical energy efficiency of a power plant: 36%

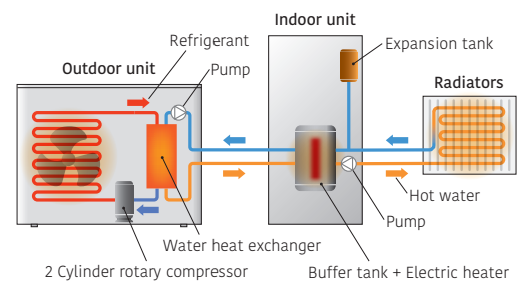
The Choice of ATW

Optimized refrigerant cycle operation

Split Type

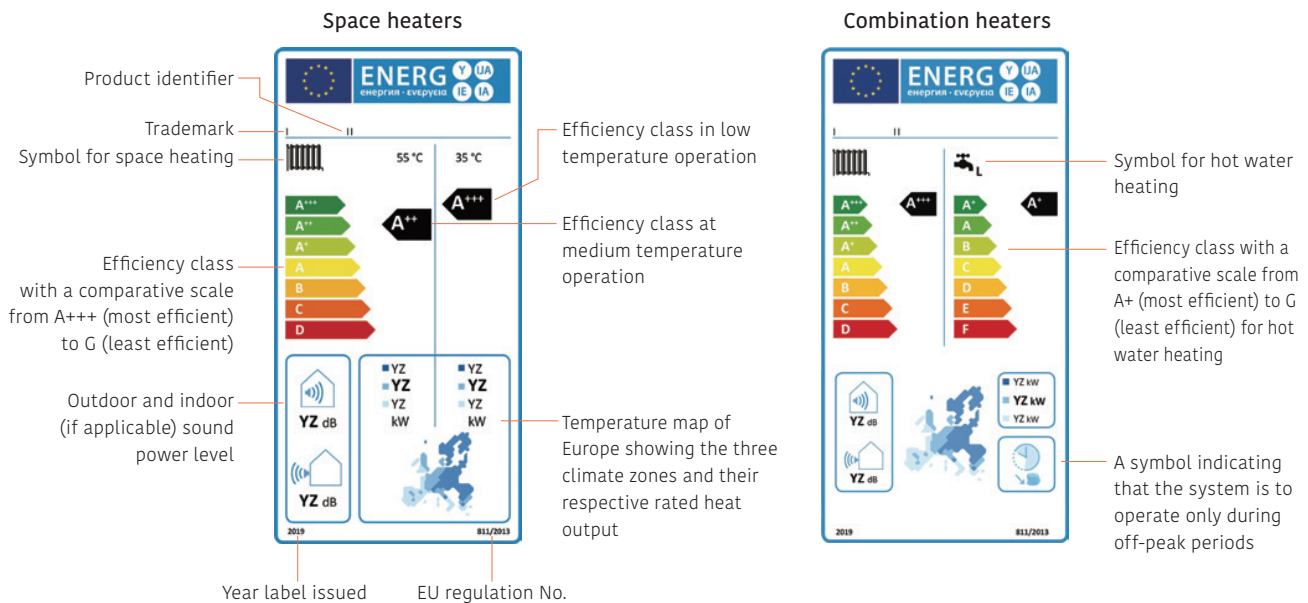


Monobloc Type



Energy Efficiency Standards

Product Labels



The Ecodesign Directive Lot 1 Regulation 813/2013

The Ecodesign directive defines a regulatory framework for improving the environmental performance of energy-related products (ErP) through design.

Since September 26, 2015, the Ecodesign Directive has applied to space heaters, including heat pumps and fossil fuel fired boilers, combination heaters for space and hot water heating, water heaters, and water storage tanks.

All of these products must meet minimum requirements for energy efficiency*¹ and maximum sound power level. The minimum energy efficiency class were raised on September 26, 2017, and the maximum sound levels were lowered on September 26, 2018.

*1: Energy efficiency is expressed in terms of seasonal space heating efficiencies (η_s). The value is based upon the Seasonal Coefficient of Performance (SCOP).

The Energy Labelling Directive (EU) No. 811/2013

Energy label is intended to enable consumers to make direct comparisons of energy use and product features. All labels should indicate the product identifier, efficiency class, sound power level, and heat output. Heat generators are rated A+++ to G. There are two different product labels. One for space heaters and one for combination heaters.

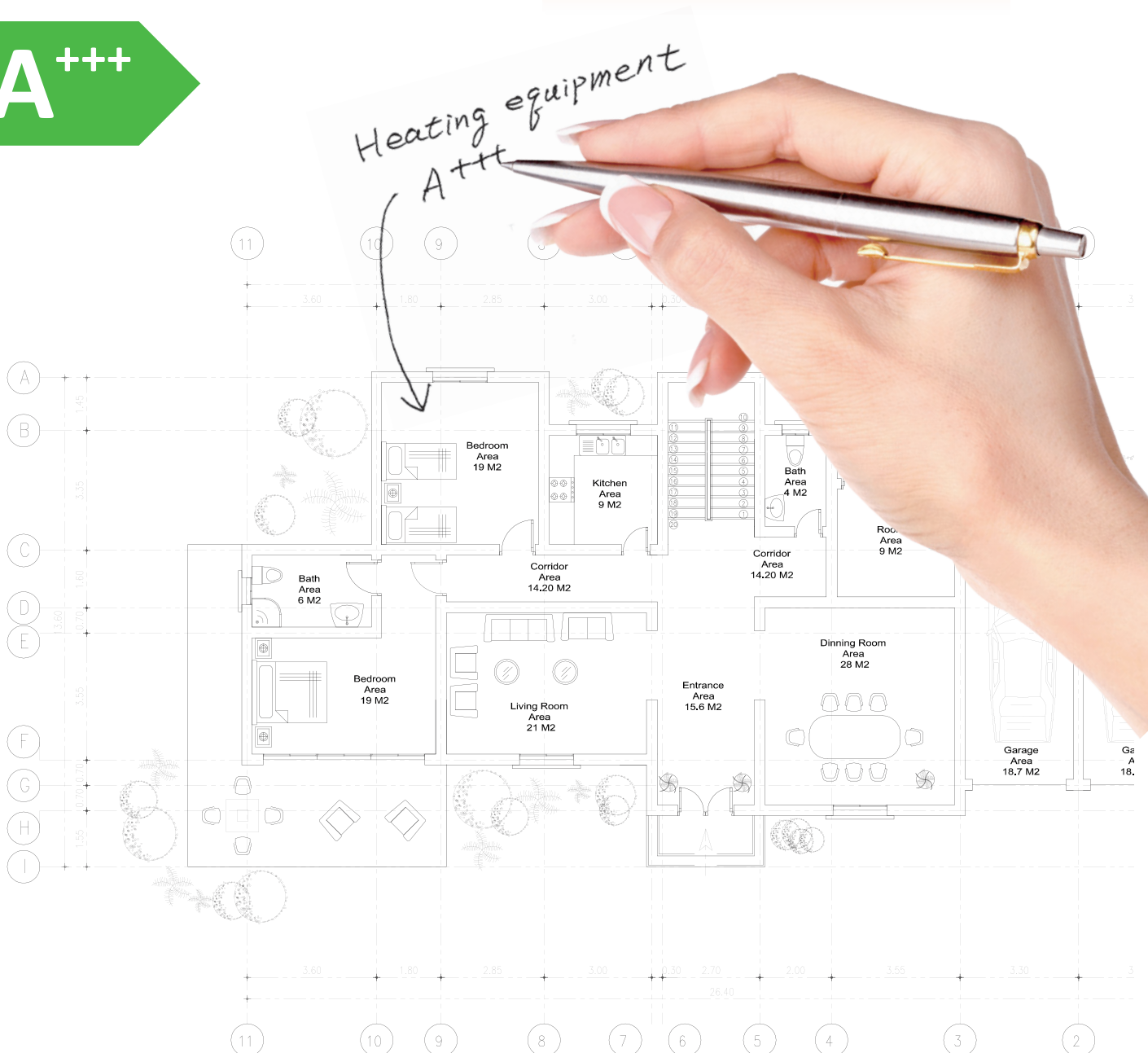
Seasonal space heating Energy efficiency class

	Except low temp. HP 55°C	Low temp. HP 35°C
A+++	$\eta_s \geq 150$	$\eta_s \geq 175$
A++	$125 \leq \eta_s < 150$	$150 \leq \eta_s < 175$
A+	$98 \leq \eta_s < 125$	$123 \leq \eta_s < 150$
A	$90 \leq \eta_s < 98$	$115 \leq \eta_s < 123$
B	$82 \leq \eta_s < 90$	$107 \leq \eta_s < 115$
C	$75 \leq \eta_s < 82$	$100 \leq \eta_s < 107$
D	$36 \leq \eta_s < 75$	$61 \leq \eta_s < 100$
E	$34 \leq \eta_s < 36$	$59 \leq \eta_s < 61$
F	$30 \leq \eta_s < 34$	$55 \leq \eta_s < 59$
G	$\eta_s < 30$	$\eta_s < 55$

Due to restrictions on the use of fossil fuels in Europe and the F-Gas regulations, the use of environmentally friendly heating equipment is required not only for new buildings but also for renovated properties. Let's consider installing high energy efficiency products that will be essential for future living environments.

Heating Equipment

A+++



AIR TO WATER Series Overview



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For New construction



For Renovation



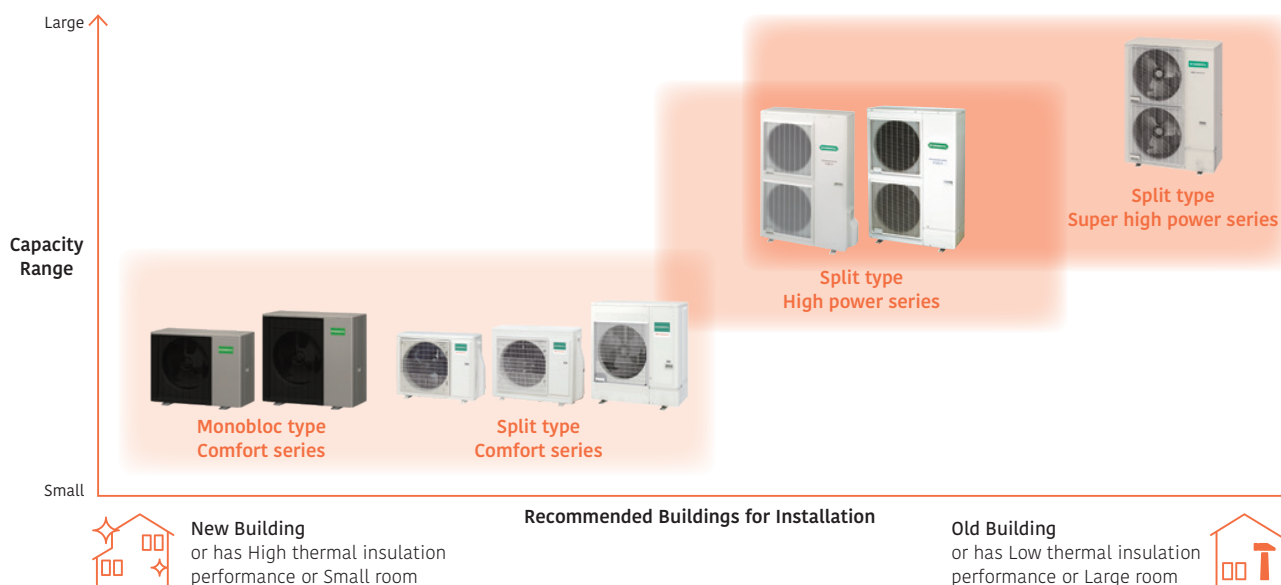
Monobloc type

Series	System Outline	Refrigerant	Recommended Buildings for Installation
Comfort series  Control box  Wall mounted  DHW integrated  5kW  8/10kW	Indoor unit Control box consists of the hot water circuit controller and the user interface. It is not connected to the water pipe. Outdoor unit - Supplies 60°C hot water even when the outdoor temperature is -5°C. - Supplies 55°C hot water even when the outdoor temperature is -10°C. - Can be used with a variety of heating systems, including under floor heating and radiators.* - Heating and DHW supply in one system.* - Up to Three independent control circuits.* - Operating range is -20 to 35°C in heating. - Cooling operation is possible		 

* Please refer to page W-042 to W-045 for optional parts information.

ATW Product Simplified Selection Method

Please select a product based on the amount of heat required to maintain a comfortable temperature in the house, just as with air conditioners. For example, the Split comfort series with a low Capacity Range is recommended for newly built houses, as they tend to have high thermal insulation performance.





RESIDENTIAL

For New construction



For Renovation



Split type

Series	System Outline	Refrigerant	Recommended Buildings for Installation
Comfort series  Wall mounted  DHW integrated  5/6kW  8kW  10kW	- Supplies 55°C hot water even when the outdoor temperature is -10°C. - Heating and DHW supply in one system.* - Equipped with additional electric heater for backup - Up to two independent control circuits.* - Cooling operation is possible.* - Operating range is -20 to 35°C. - Can be used with a variety of heating systems, including under floor heating and radiators.*		
High power series  Wall mounted  DHW integrated  11/14kW  11/14/16kW	- Supplies 60°C hot water even when the outdoor temperature is -20°C. - Can be used with a variety of heating systems, including under floor heating and radiators.* - Heating and DHW supply in one system.* - Up to two independent control circuits.* - Cascade connection is possible for up to three systems.* - Cooling operation is possible.* - Operating range is -25 to 35°C.		 
Super high power series  Wall mounted  DHW integrated  16kW	- Supplies 60°C hot water even when the outdoor temperature is -20°C. - Can be used with a variety of heating systems, including under floor heating and radiators.* - Heating and DHW supply in one system.* - Equipped with additional electric heater for backup - Up to two independent control circuits.* - Cooling operation is possible.* - Operating range is -25 to 35°C.		

* Please refer to page W-050 to W-055 for optional parts information.

AIR TO WATER Lineup

Type	Series	Refrigerant	Model	Power Source	Capacity 5kw
Monobloc type	Comfort series Control box type	 Heating & Cooling	  	Single phase, ~230 V, 50 Hz	UTW-SCBHC WPHG050KRF
	Comfort series Wall-mounted type	 Heating & Cooling	  	Single phase, ~230 V, 50 Hz	WSHP100KR3 WPHG050KRF
	Comfort series DHW Integrated type	 Heating & Cooling	  	Single phase, ~230 V, 50 Hz	WGHP100KR3-19 WPHG050KRF
Split type	Comfort series Wall-mounted type	 Heating*	   	Single phase, ~230 V, 50 Hz	WSHA050ML3 WOHA060KLT
	Comfort series DHW Integrated type	 Heating*	   	Single phase, ~230 V, 50 Hz	WGHA050ML3 WOHA060KLT
	High Power series Wall-mounted type	 Heating*	 	Single phase, ~230 V, 50 Hz	
		 Heating*	 	3-phase, ~400 V, 50 Hz	
	High Power series DHW Integrated type	 Heating*	 	Single phase, ~230 V, 50 Hz	
		 Heating*	 	3-phase, ~400 V, 50 Hz	
	Super High Power series Wall-mounted type	 Heating*	 	Single phase, ~230 V, 50 Hz	
	Super High Power series DHW Integrated type	 Heating*	 	Single phase, ~230 V, 50 Hz	

EHPA Quality Label



Fujitsu General's Air to Water² has acquired the EHPA Quality Label³ through testing in accordance with the International Standards EN14511 and EN17025. The EHPA Quality Label³ is a label that shows the end-consumer a quality heat pump unit on the market.

*2: 3-phase high power series only
*3: Learn more about the validity of the mark at www.ehpa.org/quality/quality-label/

SG ready Label



SG ready is a label issued to heat pumps and their control technologies that meet the requirements set by BWP⁴, and technologies that conform to their standards can be integrated into a smart grid. SG ready labeled heat pumps receive signals from the power grid and PV systems with regard to energy and renewable energy sources such as wind, solar, and water. All of Fujitsu General's heat pump series are SG ready compatible.

*4: BWP: Bundesverband Wärmepumpe e. V (Federal German Heat Pump Association)

Capacity							Approval	
6kw	8kw	10kw	11kw	14kw	16kw	17kw	CEN KEYMARK	EHPA
	UTW-SCBHC WPHG080KRF	UTW-SCBHC WPHG100KRF						
	WSHP100KR3 WPHG080KRF	WSHP100KR3 WPHG100KRF						
	WGHP100KR3-19 WPHG080KRF	WGHP100KR3-19 WPHG100KRF						
WSHA080ML3 WOHA060KLT	WSHA080ML3 WOHA080KLT	WSHA100ML3 WOHA100KLT						
WGHA080ML3 WOHA060KLT	WGHA080ML3 WOHA080KLT	WGHA100ML3 WOHA100KLT						
			WSHG140DG WOHG112LHT	WSHG140DG WOHG140LCTA				
			WSHG140DG WOHK112LCTA	WSHG140DG WOHK140LCTA	WSHG140DG WOHK160LCTA			
			WGHG140DG WOHG112LHT	WGHG140DG WOHG140LCTA				
			WGHG140DG WOHK112LCTA	WGHG140DG WOHK140LCTA	WGHG140DG WOHK160LCTA			
					WSHG160DJ6 WOHG160LJL			
					WGHG160DJ6 WOHG160LJL			

*Cooling is available by using the option

The CEN Heat Pump KEYMARK



The Heat Pump KEYMARK is a full certificate supporting the quality of heat pumps in the European market. The Heat Pump KEYMARK is a voluntary, independent, European certification mark (ISO Type 5 Certification) for all heat pumps, combination heat pumps, and hot water heaters (as covered by Ecodesign, EU Regulation 813/2013 and 814/2013). Fujitsu General's Air to Water[®] has acquired the KEYMARK certificate^{*}.

*5: R32 refrigerant comfort model only

*6: Learn more about the validity of the mark at www.heatpumpkeymark.com/about/



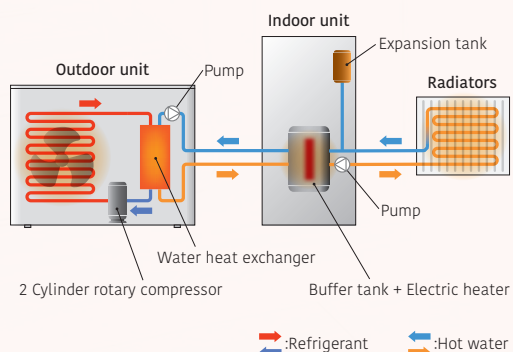


Monobloc Type

Comfort series

System configuration example

No refrigerant pipe is required as outdoor unit and indoor unit (or tank) are connected by water pipe



*System configuration when using Wall-mounted indoor unit

Fits into Your Life



AIR TO WATER

Monobloc type with fewer pipe works and easy installation. It provides a wide variety of solutions to meet the usage environment.

Aesthetic and Compact Design

By changing from the conventional two-fan system to a large-diameter single-fan system, we have been able to keep the height down. Because it is lower than a house window, you won't have any trouble finding a place to install the outdoor unit.



8 & 10 kW Classes

High Energy Efficiency

Energy Efficiency Class



*Temperature application: Heating temp. 35°C

Plate heat exchanger with high heat exchange performance improves energy-related product performance, achieving high energy efficiency. All classes achieved top rank A+++* energy efficiency class.

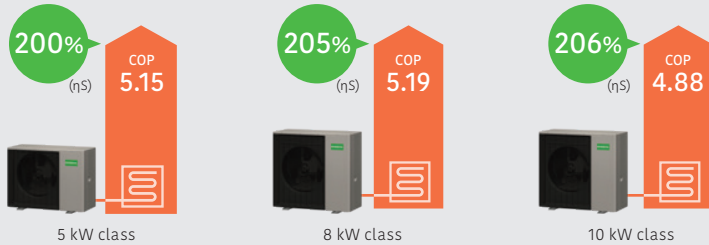
Compact & High efficiency
Plate heat exchanger

Transmitting the heat
of the Refrigerant to
the Water.



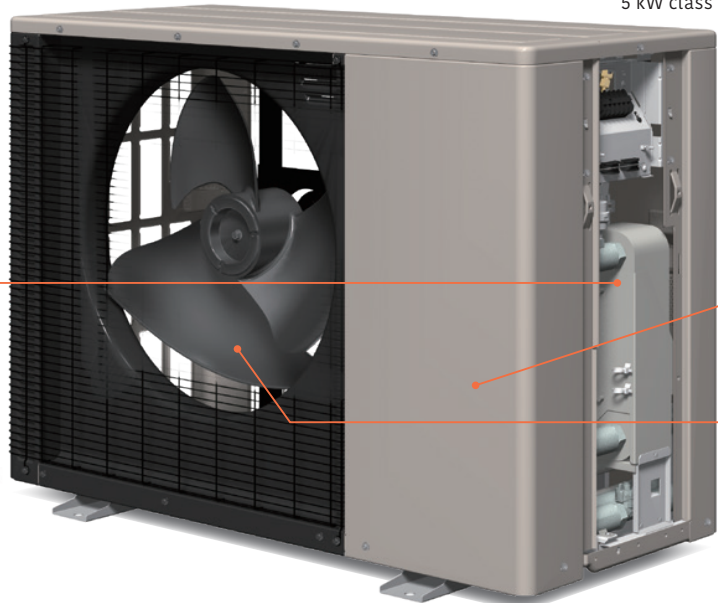
Seasonal space heating energy efficiency (η_s)

Conditions: Outdoor Temp. 7°C Heating Temp. 35°C



* Value when the control box is connected

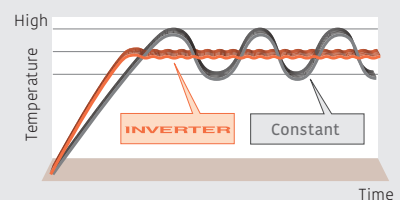
5 kW class



Inverter Technology

Inverter-equipped models operate at a capacity suited to the heat load. Because they can respond to heat loads in details inverter-equipped models are more economical and comfortable than non-inverter models. Compared to a non-inverter, it reaches the set temperature more quickly, operates at the minimum capacity and responds to slight changes in water temperature. The range of water temperature fluctuation is small, and a comfortable temperature is maintained.

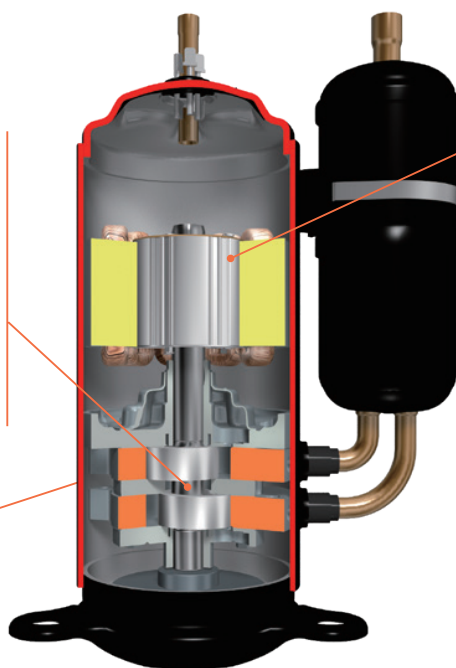
Inverter technology controls temperatures precisely.



Technology to Achieve high Efficiency

High-precision parts

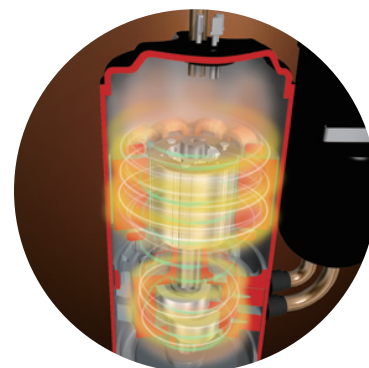
The precision machining of parts has improved the degree of adhesion between parts. Refrigerant leakage from gaps has been reduced, leading to improved compression efficiency and high-efficiency operation. In addition, the contact surfaces between parts have been smoothed and the amount of wear has been reduced, resulting in stable performance over a long period of time.



2 Cylinder rotary compressor

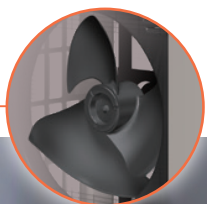
High-magnetic flux motor

Copper and iron losses are thoroughly suppressed to realize high magnetic flux of the motor. The high magnetic flux produces stronger torque than ever before. Thanks to this, operation with less current is possible, bringing out high-efficiency operation.



Smooth gas flow

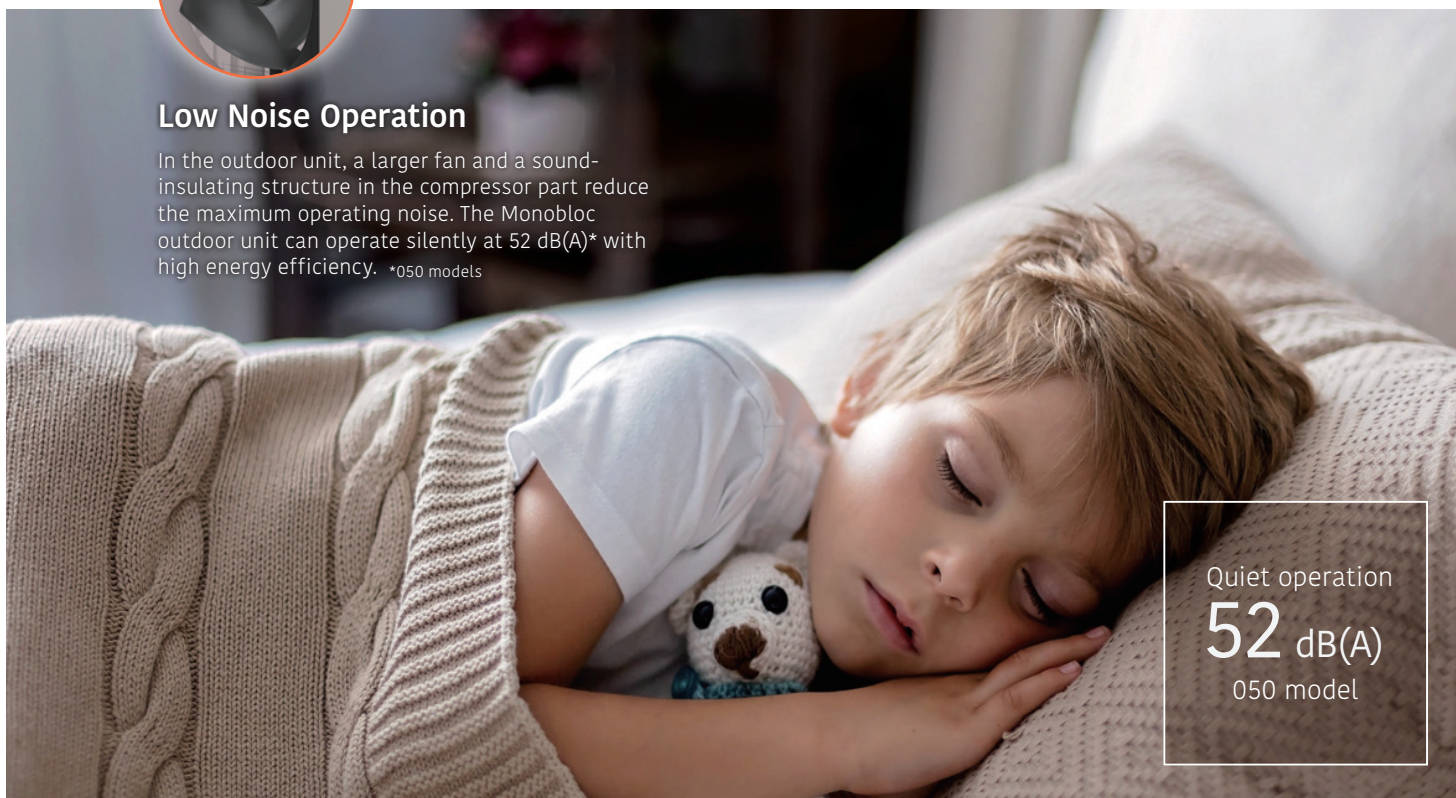
The arrangement of parts that do not obstruct refrigerant flow in the compressor leads to highly efficient operation. Broad interpretation of the optimization of refrigerant flow paths has resulted in about 13 patents.



Larger fan

Low Noise Operation

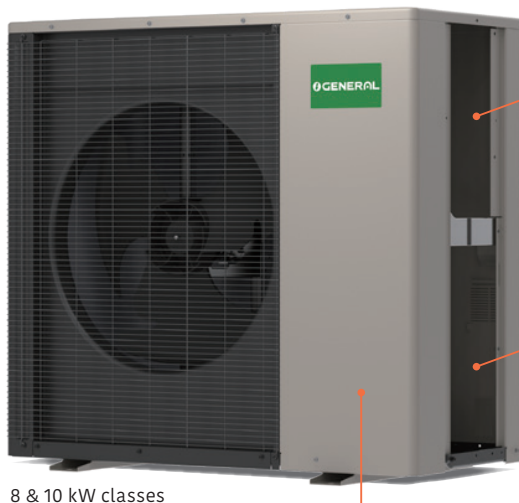
In the outdoor unit, a larger fan and a sound-insulating structure in the compressor part reduce the maximum operating noise. The Monobloc outdoor unit can operate silently at 52 dB(A)* with high energy efficiency. *050 models



Quiet operation
52 dB(A)
050 model

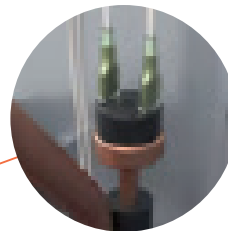
Durability and Reliability

We take care to ensure that our products can be used by our customers for a long time.
We have taken measures to reduce damage to our products even in the event of problems with the installation environment or during operation.



Pressure Switch

The pressure switch equipped on the refrigerant cycle protects the system from malfunction that may be caused by abnormal refrigerant pressure.



Silicon Coating of PCBs

The silicon coating protects the PCBs and their components from damage caused by small animals living in the electrical box and salt.

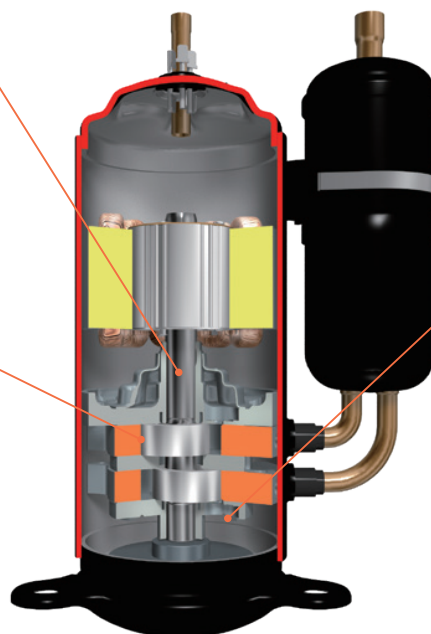


Optimized shaft design

- The stress on specific parts is reduced, reducing the risk of wear and damage
- Vibration during rotation is reduced, reducing wear and fatigue damage, and ultimately improving durability

DLC coating vane

- It has a very high hardness and low wear coefficient, and shows excellent resistance to wear
- It is chemically stable and has excellent resistance to various working fluids and environmental conditions, so it protects the vanes from corrosion and chemical degradation, contributing to a longer lifespan



2 Cylinder rotary compressor

Technology to Increase Durability

Optimal lubricant

- Prevents friction and heating of parts, improving durability
- Contains rust-proofing and antioxidant agents, protecting metal parts from corrosion and preventing breakdowns and performance degradation
- Reduces impact between parts, suppresses vibration, and prevents excessive stress on parts, improving durability



*The values in the pictures are examples.

Service Monitor Tool

UTY-ASSXZ1

Bluetooth Communication

AIRSTAGE Service Monitor Tool can diagnose using a smart device and reduce the working time compared with diagnosis by PC. No need to connect a PC making diagnosis easier even in narrow spaces.



Application with simple design

Application for smart devices has been released. The stylish design makes the application easy to use for everyone.

Refrigerant cycle diagram display

The operating status can be displayed with a simple, clear diagram*2 on the smart device. It reduces the time for diagnosis and makes diagnosis easier. It can complement abundant experience and advanced knowledge of refrigerant cycle. This shortens the training time for service personnel.

*2: List and graph displays are also available



AIRSTAGE Service Monitor Tool

Compact and Lightweight Design

This model is easy to carry by compact and lightweight design. The service personnel can visit the maintenance site with small luggage.



Function List

UTY-ASSXZ1		
Product specification	Installation	Outdoor unit PCB
	Communication	Bluetooth
Function	Product distinction	
	Signal-type distinction	
	Operating status display	List
		Graph
		Refrigerant cycle diagram
		Operating history records
	Adapter firmware update	
	Adapter status monitoring	
	Input and output of history data	

Specifications

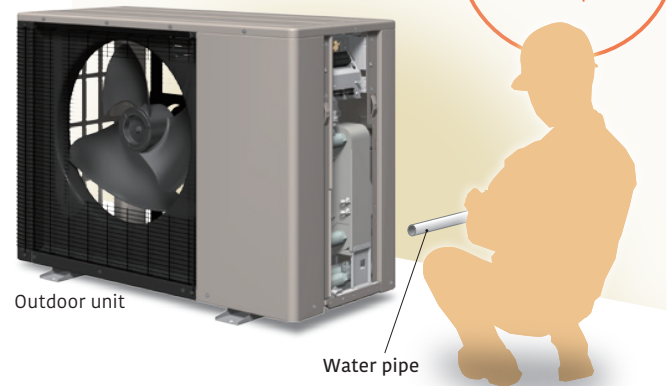
UTY-ASSXZ1	
Dimensions (H x W x D) (mm)	20 x 35 x 60 (adapter)
Communication cable (cm)	60
Weight (g)	25 (adapter)
Communication method	Bluetooth 5.3
Max. communication distance (m)	10*3
Compatible device	Android8.0, iOS17 or later

*3: Depends on the environment

Serviceability and Maintainability

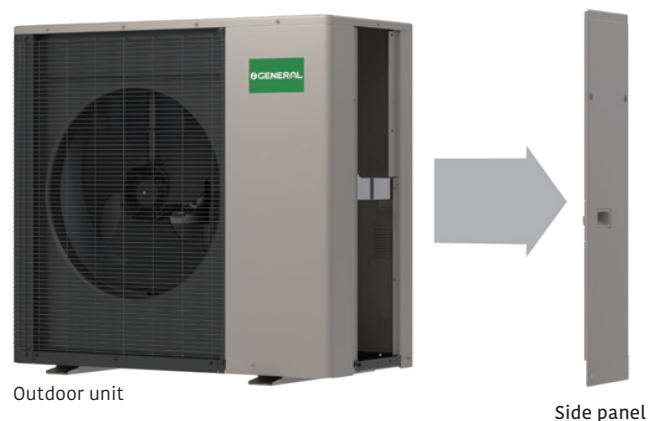
Easy Pipe Work

No refrigerant pipe work is required as the outdoor unit is an integrated unit. The hot water unit comes standard with the outdoor unit. Installation requires only hydraulic connection work, making installation easy.



Easy Installation

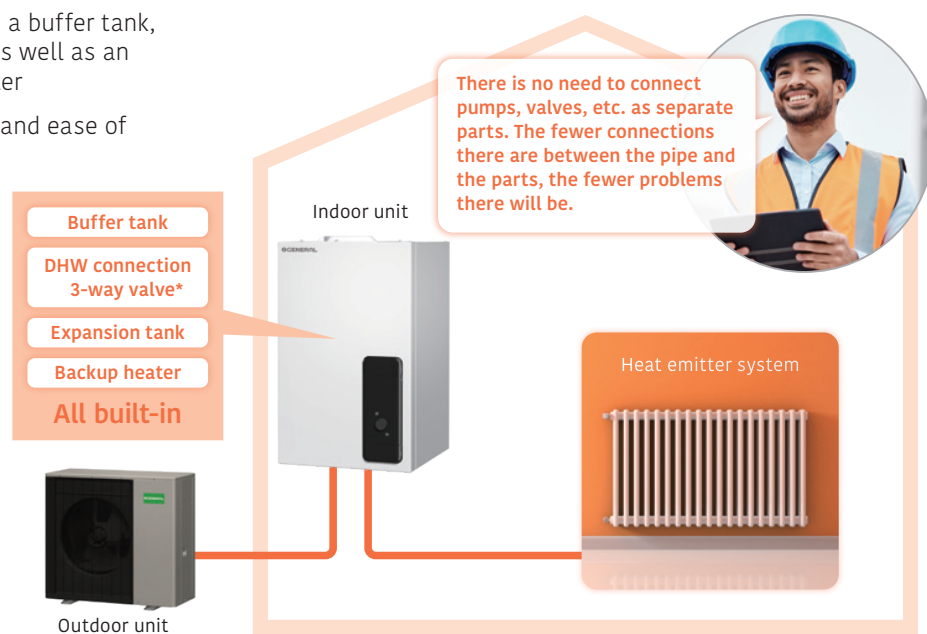
Wire connections can be made simply by removing the side panel, so installation work can be easily carried out from a single direction. The compact, lightweight panel is easy to remove.



Improved Workability

- The indoor unit is equipped with a buffer tank, DHW connection 3-way valve*, as well as an expansion tank and backup heater
- This improves system reliability and ease of installation

*Wall-mounted only



Useful Features

Features	Explanation
Quick recovery from defrosting	Maintains room temperature by boost start operation during defrosting
Auto changeover	When auto mode is selected, the system automatically switches between cooling and heating modes depending on the outside temperature.
2-zone independent control	2-zone independent control
Backup heater operation	Backup heater maintains a comfortable room temperature even when the outside temperature is low. It is intelligently controlled as a safety backup for very cold days and nights, and only operates when really needed.
Peak cut function	Sets the peak current value to reduce power consumption. Mode 1 -> 100% Mode 2 -> 75% Mode 3 -> 50% Mode 4 -> Almost 0%
Anti-Freezing function	When the outside temperature drops below a specified level, the compressor will self-activate and water will also be automatically circulated to prevent freezing.
Anti-Legionella function	Prevents the growth of Legionella bacteria in the DHW tank to supply safe and clean hot water at all times.
Emergency operation	If an outdoor unit fails to operate, a built-in backup heater or an external boiler is activated to supply an uninterrupted supply of hot water to the house.

AIR TO WATER

Indoor unit:
UTW-SCBHC

Outdoor unit:
WPHG050KRF / WPHG080KRF
WPHG100KRF



Control box
Single phase



Outdoor unit
Single phase
5 kW



Outdoor unit
Single phase
8/10 kW

Specifications

Model Name		Indoor unit		UTW-SCBHC		Control box		UTW-SCBHC		UTW-SCBHC	
		Outdoor unit		WPHG050KRF		WPHG080KRF		WPHG100KRF			
Capacity Range				5		8		10			
7°C/35°C floor heating *1	Heating capacity (Max.)		kW	5.00 (8.31)		8.00 (13.28)		10.00 (15.20)			
	Input power (Max.)			0.97 (1.97)		1.54 (2.96)		2.05 (3.53)			
	COP (Max.)			5.15 (4.22)		5.19 (4.48)		4.88 (4.30)			
7°C/55°C radiator *1	Heating capacity (Max.)		kW	5.00 (7.21)		8.00 (10.60)		10.00 (11.56)			
	Input power (Max.)			1.64 (2.44)		2.62 (3.51)		3.36 (3.94)			
	COP (Max.)			3.04 (2.95)		3.05 (3.02)		2.98 (2.93)			
-7°C/55°C radiator *1	Heating capacity (Max.)		kW	4.80 (5.36)		7.50 (8.15)		8.50 (9.00)			
	Input power (Max.)			2.25 (2.57)		3.50 (3.94)		3.97 (3.94)			
	COP (Max.)			2.13 (2.09)		2.14 (2.07)		2.14 (2.93)			
35°C/18°C cooling mode *1	Cooling capacity (Max.)		kW	5.45 (6.55)		7.79 (10.87)		9.40 (10.87)			
	Input power (Max.)			1.25 (1.82)		1.69 (3.22)		2.40 (3.22)			
	EER (Max.)			4.35 (3.60)		4.62 (3.37)		3.91 (3.37)			
Space heating characteristics*2											
Temperature application			°C	55	35	55	35	55	35		
Energy efficiency class				A++	A+++	A++	A+++	A++	A+++		
Rated heat output (P _{rated})			kW	6	6	9	9	10	10		
Seasonal space heating energy efficiency (η _s)			%	143	200	144	205	146	206		
Annual energy consumption			kWh	3,110	2,364	4,880	3,571	5,480	4,018		
Sound power level*3		Outdoor unit	dB(A)	52	52	56	56	57	57		
Indoor unit specifications											
Power source				Single phase, 230 V, 50 Hz							
Dimensions H × W × D			mm	483 × 370 × 222		483 × 370 × 222		483 × 370 × 222			
Weight (Net)			kg	10		10		10			
Outdoor unit specifications											
Power source				Single phase, 230 V, 50 Hz							
Current		Max.	A	14.6		19.1		20.6			
Water flow temperature range		Max.	°C	60		60		60			
Dimensions H × W × D			mm	798 × 1,080 × 480		1,008 × 1,080 × 480		1,008 × 1,080 × 480			
Weight (Net)			kg	85		109		109			
Refrigerant		Type (Global Warming Potential)		R32 (675)		R32 (675)		R32 (675)			
		Charge	kg	0.88		1.47		1.47			
Connection pipe	Diameter	Water	mm	Ø25.4		Ø25.4		Ø25.4			
Operating range		Heating	°C	-20 to 35		-20 to 35		-20 to 35			

*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

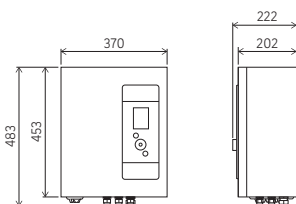
*2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

*3: The sound power level values are based on EN12102 standard measurements under EN14825 standard conditions.

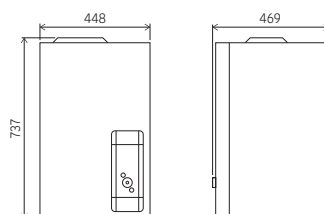
Dimensions

(Unit: mm)

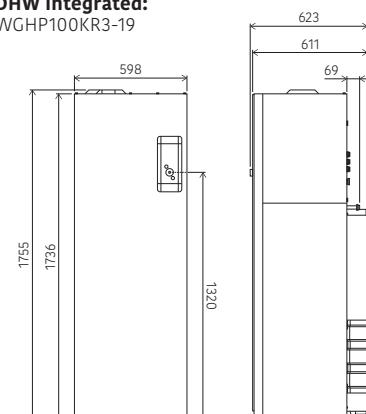
Control box:
UTW-SCBHC



Wall Mounted:
WSHP100KR3



DHW Integrated:
WGHP100KR3-19



Indoor unit:
WSHP100KR3
WGHP100KR3-19

Outdoor unit:
WPHG050KRF / WPHG080KRF
WPHG100KRF



Wall Mounted
Single phase



DHW Integrated
Single phase



Outdoor unit
Single phase
5kW



Outdoor unit
Single phase
8/10 kW

Specifications

Model Name	Indoor unit		Wall Mounted				DHW Integrated					
	Outdoor unit		WSHP100KR3	WSHP100KR3	WSHP100KR3	WGHP100KR3-19	WGHP100KR3-19	WGHP100KR3-19				
Capacity Range			5	8	10	5	8	10				
7°C/35°C floor heating* ¹	Heating capacity (Max.)	kW	5.00 (8.10)	8.00 (13.07)	10.00 (14.99)	5.00 (8.10)	8.00 (13.07)	10.00 (14.99)				
	Input power (Max.)		1.00 (2.00)	1.57 (3.08)	2.13 (3.64)	1.00 (2.00)	1.57 (3.08)	2.13 (3.64)				
	COP (Max.)		4.99 (4.05)	5.08 (4.24)	4.70 (4.11)	4.99 (4.05)	5.08 (4.24)	4.70 (4.11)				
7°C/55°C radiator* ¹	Heating capacity (Max.)	kW	5.00 (6.86)	8.00 (10.24)	10.00 (11.20)	5.00 (6.86)	8.00 (10.24)	10.00 (11.20)				
	Input power (Max.)		1.72 (2.47)	2.62 (3.55)	3.40 (3.99)	1.72 (2.47)	2.62 (3.55)	3.40 (3.99)				
	COP (Max.)		2.91 (2.77)	3.05 (2.89)	2.94 (2.81)	2.91 (2.77)	3.05 (2.89)	2.94 (2.81)				
-7°C/55°C radiator* ¹	Heating capacity (Max.)	kW	4.80 (4.90)	7.50 (7.69)	8.50 (8.54)	4.80 (4.90)	7.50 (7.69)	8.50 (8.54)				
	Input power (Max.)		2.51 (2.62)	3.62 (3.99)	4.11 (4.35)	2.51 (2.62)	3.62 (3.99)	4.11 (4.35)				
	COP (Max.)		1.91 (1.87)	2.07 (1.93)	2.07 (1.96)	1.91 (1.87)	2.07 (1.93)	2.07 (1.96)				
35°C/18°C cooling mode* ¹	Cooling capacity (Max.)	kW	5.35 (6.42)	7.69 (10.75)	9.30 (10.75)	5.35 (6.42)	7.69 (10.75)	9.30 (10.75)				
	Input power (Max.)		1.26 (1.85)	1.72 (3.32)	2.47 (3.32)	1.26 (1.85)	1.72 (3.32)	2.47 (3.32)				
	EER (Max.)		4.23 (3.48)	4.47 (3.24)	3.77 (3.24)	4.23 (3.48)	4.47 (3.24)	3.77 (3.24)				
Space heating characteristics* ²												
Temperature application		°C	55	35	55	35	55	35	55	35		
Energy efficiency class			A++	A+++	A++	A+++	A++	A+++	A++	A+++		
Rated heat output (P _{rated})		kW	6	6	9	9	10	10	6	6		
Seasonal space heating energy efficiency (η _s)		%	133	189	139	195	141	195	133	189		
Annual energy consumption		kWh	3,355	2,503	5,078	3,764	5,685	4,269	3,355	2,503		
Sound power level* ³		Outdoor unit	dB(A)	52	52	56	56	57	57	52		
Indoor unit specifications												
Power source			Single phase, 230 V, 50 Hz				Single phase, 230 V, 50 Hz					
Dimensions H × W × D		mm	737 × 448 × 469			737 × 448 × 469			1755 × 598 × 623			
Weight (Net)		kg	34.0			34.0			130.0			
Water circulation		Min./Max.	L/min	8.5			14.5			8.5		
DHW tank volume		L	-			-			190			
Buffer tank capacity		L	16			16			16			
Expansion vessel capacity		L	12			12			12			
Water flow tempreature range		Max.	°C	60			60			60		
Water pipe connection diameter		Flow/Return	mm	Ø19.05/Ø19.05			Ø19.05/Ø19.05			Ø19.05/Ø19.05		
Electrical heater capacity		Heating	kW	3.0			3.0			3.0		
		DHW	kW	-			-			1.2		
Declared load profile		-	-	-			-			L		
Efficiency η _{DHW}		%	-	-			-			124		
Heating up time			-	-			-			1h45min		
COP(EN16147)		-	-	-			-			3.10		
Outdoor unit specifications												
Power source			Single phase, 230 V, 50 Hz				Single phase, 230 V, 50 Hz					
Current		Max.	A	14.6			19.1			20.6		
Water flow temperature range		Max.	°C	60			60			60		
Dimensions H × W × D		mm	798 × 1,080 × 480			1,008 × 1,080 × 480			1,008 × 1,080 × 480			
Weight (Net)		kg	85			109			109			
Refrigerant		Type (Global Warming Potential)	R32 (675)			R32 (675)			R32 (675)			
		Charge	kg	0.88			1.47			1.47		
Connection pipe		Diameter	mm	Ø25.4			Ø25.4			Ø25.4		
Operating range		Heating	°C	-20 to 35			-20 to 35			-20 to 35		

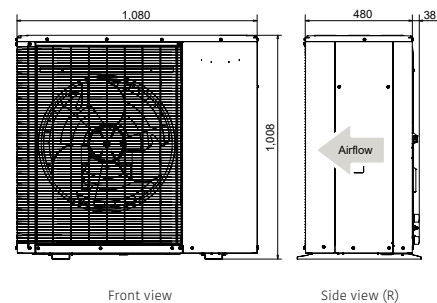
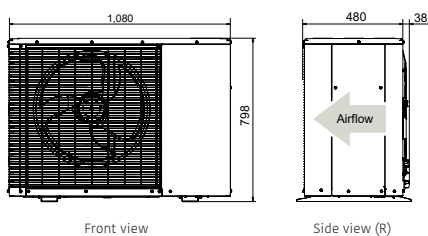
*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

*2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

*3: The sound power level values are based on EN12102 standard measurements under EN14825 standard conditions.

Outdoor unit:
WPHG050KRF

WPHG080KRF/WPHG100KRF





Split Type

Comfort series

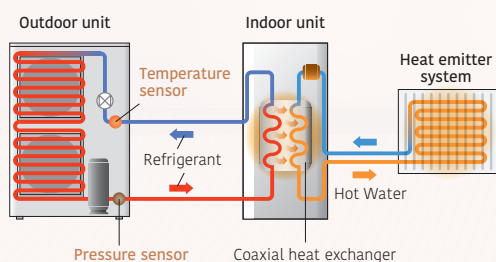


Split Type

High Power series
Super High Power series

This is a split type that exchanges heat from Air to Water inside the indoor unit.

A wide range of products to suit regional characteristics, family structures, and usage patterns. We provide a variety of products to meet the needs of customers from the heating-centered high power series to the reasonably priced compact series.



*Indoor unit : Wall-mounted

High Energy Efficiency

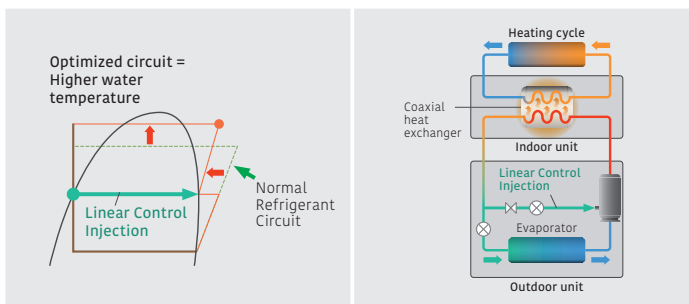
All classes achieved top rank A+++* energy efficiency class.

For Outdoor Unit



Twin-Rotary Compressor with Linear Control Injection Port

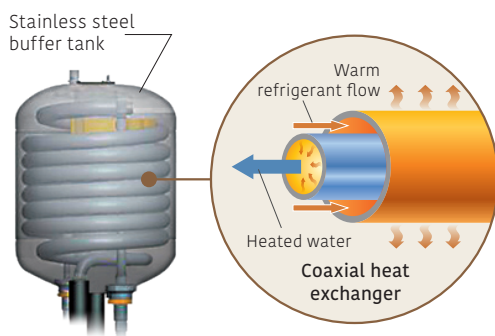
The compressor achieves a high condensing temperature without overheating the discharge gas temperature due to the Linear control injection process used during compression. This makes the condensing temperature higher than in a normal circuit. Higher water temperatures can be achieved by controlling the injection volume according to usage conditions.



*High power and super high power only

For Indoor Unit

High-durability coaxial heat exchanger



Stainless Steel Buffer Tank

Heat exchange amount is 25% higher than the previous model. Energy-saving performance has also been improved. The buffer tank has anti-corrosion protection thanks to stainless steel material.

Class A Pump

Energy-saving pump with the ability to adjust the flow rate and pressure to a constant level



Durability and Reliability

We take care to ensure that our products can be used by our customers for a long time. We have taken measures to reduce damage to our products even in the event of problems with the installation environment or during operation.



For Outdoor Unit



Pressure Switch

The pressure switch equipped on the refrigerant cycle protects the system from malfunction that may be caused by abnormal refrigerant pressure.



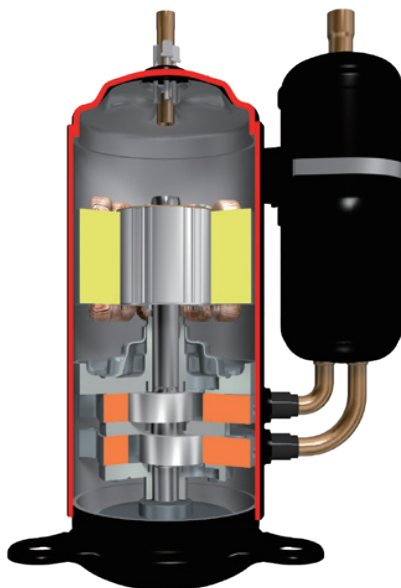
Silicon Coating of PCBs

The silicon coating protects the PCBs and their components from damage caused by small animals living in the electrical box and salt.

2 Cylinder Rotary Compressor

Optimal bearings

Reduced stress on specific parts of the body reduces the risk of wear and tear. Reduced vibration during rotation reduces wear and fatigue damage, resulting in increased durability.



Coated vane

- Very high hardness and low coefficient of wear, providing excellent resistance to abrasion. Scientifically stable and highly resistant to a wide range of working fluids and environmental conditions, it protects vanes from corrosion and chemical degradation, contributing to longer service life.

Optimal lubricating oil

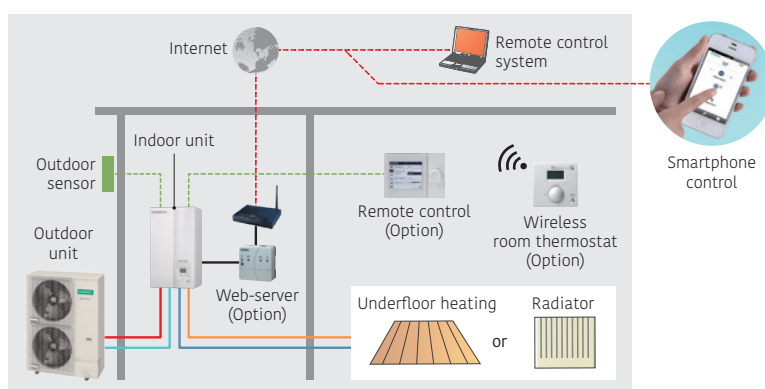
- Improves durability by preventing friction and heating of parts
- Contains rust inhibitors and antioxidants to protect metal parts from corrosion, which can cause failure and loss of performance.
- Reduces shock and vibration between parts, preventing overstressing of parts and increasing durability

Useful Features

Features	Explanation
Quick recovery from defrosting	Maintains room temperature by boost start operation during defrosting
Auto changeover	When cooling mode is selected, the system automatically switches between cooling and heating modes depending on the outside temperature.
2-zone independent control	2-zone independent control
Backup heater operation	Backup heater maintains a comfortable room temperature even when the outside temperature is low. It is intelligently controlled as a safety backup for very cold days and nights, and only operates when really needed.
Peak cut function	Sets the peak current value to reduce power consumption. Mode 1 -> 100% Mode 2 -> 75% Mode 3 -> 50% Mode 4 -> Almost 0%
Anti-Freezing function	When the outside temperature drops below a specified level, the compressor will self-activate and water will also be automatically circulated to prevent freezing.
Anti-Legionella function	Prevents the growth of Legionella bacteria in the DHW tank to supply safe and clean hot water at all times.
Emergency operation	If an outdoor unit fails to operate, a built-in backup heater or an external boiler is activated to supply an uninterrupted supply of hot water to the house.

Smart Control

To meet the diverse needs of customers, we offer a variety of control options, such as individual control and remote control options.



AIR TO WATER

Split Type

Wall Mounted type
Comfort series



A⁺⁺



A⁺⁺⁺

Max 55°C

High Water Flow Temperature

The temperature of water flow is up to 55°C without a backup heater. Hot water supply temperature can be maintained even at -10°C outdoor temperature.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.

Outdoor temp.
-10°C

Water temp.
55°C



Comfort series

High COP

Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

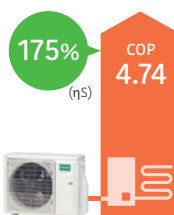
Energy efficiency class

A^{+++*}

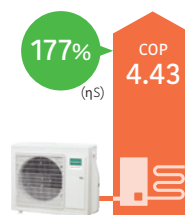
*Temperature application: Heating temp. 35°C

Seasonal space heating energy efficiency (η_s)

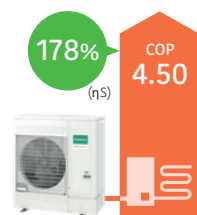
Conditions: Outdoor Temp. 7°C Heating Temp. 35°C



Comfort series
5 kW class



Comfort series
8 kW class



Comfort series
10 kW class

Outdoor unit technology



DC Fan Motor

High-performance, high-efficiency small DC fan motor mounted



DC Twin-Rotary Compressor

High-efficiency DC twin-rotary compressor



DC Inverter

DC inverter provides smooth water temperature control.

Indoor unit:**WSHA050ML3 / WSHA080ML3 /
WSHA100ML3****Outdoor unit:****WOHA060KLT / WOHA080KLT /
WOHA100KLT****Wall-mounted**
Single phase**Outdoor unit**
Single phase
5/6 kW**Outdoor unit**
Single phase
8 kW**Outdoor unit**
Single phase
10 kW**Specifications**

Model Name	Indoor unit		WSHA050ML3 WOHA060KLT		WSHA080ML3 WOHA060KLT		WSHA080ML3 WOHA080KLT		WSHA100ML3 WOHA100KLT	
Capacity Range			5		6		8		10	
7°C/35°C floor heating * ¹	Heating capacity (Max.)	kW	4.50 (7.64)		5.50 (8.93)		7.50 (9.64)		9.50 (15.29)	
	Input power (Max.)		0.949 (1.80)		1.18 (2.24)		1.69 (2.46)		2.11 (3.89)	
	COP (Max.)		4.74 (4.24)		4.65 (3.99)		4.43 (3.92)		4.50 (3.93)	
2°C/35°C floor heating * ¹	Heating capacity	kW	4.50		5.30		6.30		9.30	
	Input power		1.33		1.65		1.96		3.08	
	COP		3.39		3.22		3.21		3.02	
-7°C/35°C floor heating* ¹	Heating capacity (Max.)	kW	4.40 (4.97)		5.00 (6.13)		5.70 (7.05)		8.90 (10.40)	
	Input power (Max.)		1.59 (1.67)		1.90 (2.12)		2.13 (2.55)		3.36 (3.62)	
	COP (Max.)		2.76 (2.98)		2.63 (2.89)		2.68 (2.76)		2.65 (2.87)	
-7°C/55°C Radiator* ¹	Heating capacity (Max.)	kW	3.90 (4.24)		4.25 (4.86)		5.30 (5.85)		8.00 (8.00)	
	Input power (Max.)		2.11 (2.25)		2.25 (2.69)		2.79 (3.26)		4.10 (4.10)	
	COP (Max.)		1.85 (1.88)		1.89 (1.81)		1.90 (1.79)		1.95 (1.95)	
Space heating characteristics* ²										
Temperature application		°C	55	35	55	35	55	35	55	35
Energy efficiency class			A++	A+++	A++	A+++	A++	A+++	A++	A+++
Rated heat output (P _{rated})		kW	5	5	5	6	6	7	8	9
Seasonal space heating energy efficiency (η _s)		%	125	175	125	175	128	177	130	178
Annual energy consumption		kWh	3,035	2,322	3,411	2,594	3,903	2,982	5,083	3,875
Sound power level* ³	Indoor unit	dB(A)	40	-	40	-	40	-	40	-
	Outdoor unit		57	-	57	-	60	-	62	-
Indoor unit specifications										
Power source			Single phase, ~230 V, 50 Hz							
Dimensions H × W × D		mm	847 × 450 × 493		847 × 450 × 493		847 × 450 × 493		847 × 450 × 493	
Weight (Net)		kg	47		47		47		47	
Water circulation		Min./Max.	L/min		7.6/22.0		8.5/22.0		10.0/22.0	
Buffer tank capacity		L	16		16		16		16	
Expansion vessel capacity		L	8		8		8		8	
Water flow temperature range		Max.	°C		55		55		55	
Water pipe connection diameter		Flow/Return	mm		Ø25.4/Ø25.4		Ø25.4/Ø25.4		Ø25.4/Ø25.4	
Electrical heater capacity		Heating	kW		3.0		3.0		3.0	
Outdoor unit specifications										
Power source			Single phase, ~230 V, 50 Hz							
Current		Max.	A		13.0		18.0		19.0	
Dimensions H × W × D		mm	632 × 799 × 290		632 × 799 × 290		716 × 820 × 315		998 × 940 × 320	
Weight (Net)		kg	39		39		42		62	
Refrigerant	Type (Global Warming Potential)		R32 (675)		R32 (675)		R32 (675)		R32 (675)	
	Charge	kg	0.97		0.97		1.02		1.63	
Additional refrigerant charge			g/m		25		25		20	
Connection pipe	Diameter	Liquid	mm		6.35		6.35		9.52	
		Gas	mm		12.70		12.70		15.88	
	Length	Min./Max.	m		3/30		3/30		3/30	
	Length (Pre-charge)	m		15		15		15		20
	Height difference	Max.	m		20		20		20	
Operating range		Heating	°C		-20 to 35		-20 to 35		-20 to 35	

*¹: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

*²: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

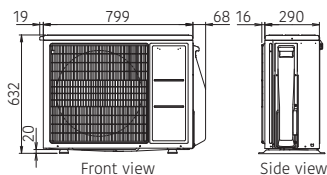
*³: The sound power level values are based on EN12102 standard measurements under EN14825 standard conditions.

Dimensions

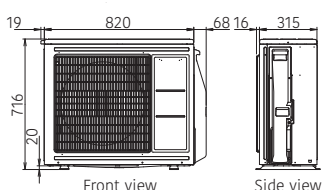
(Unit: mm)

Outdoor Unit:

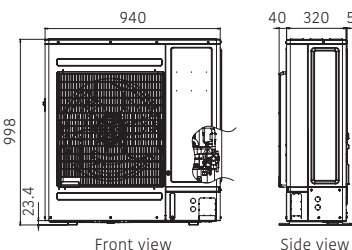
WOHA060KLT



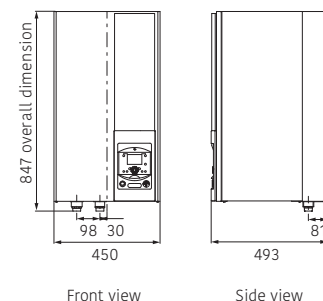
WOHA080KLT



WOHA100KLT

**Indoor Unit:**

WSHA050ML3/WSHA080ML3/WSHA100ML3



AIR TO WATER

Split Type

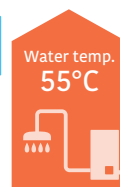
DHW Integrated type
Comfort series



High Water Flow Temperature

The temperature of water flow is up to 55°C without a backup heater. Hot water supply temperature can be maintained even at -10°C outdoor temperature.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.



Comfort series

High COP

Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

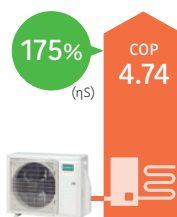
Energy efficiency class



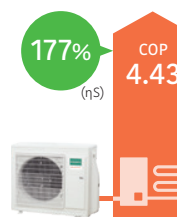
*Temperature application: Heating temp. 35°C

Seasonal space heating energy efficiency (η_s)

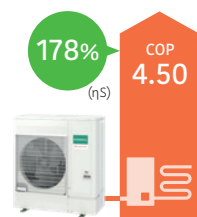
Conditions: Outdoor Temp. 7°C Heating Temp. 35°C



Comfort series
5 kW class



Comfort series
8 kW class



Comfort series
10 kW class

Outdoor Unit Technology



DC Fan Motor

High-performance, high-efficiency small DC fan motor mounted



DC Twin-Rotary Compressor

High-efficiency DC twin-rotary compressor



DC Inverter

DC inverter provides smooth water temperature control.

Indoor unit:
WGHA050ML3 / WGHA080ML3 /
WGHA100ML3

Outdoor unit:
WOHA060KLT / WOHA080KLT /
WOHA100KLT



DHW
Integrated
Single phase



Outdoor unit
Single phase
5/6 kW



Outdoor unit
Single phase
8 kW



Outdoor unit
Single phase
10 kW

Specifications

Model Name	Indoor unit	WGHA050ML3	WGHA080ML3	WGHA080ML3	WGHA100ML3
	Outdoor unit	WOHA060KLT	WOHA060KLT	WOHA080KLT	WOHA100KLT
Capacity range		5	6	8	10
7°C/35°C floor heating *1	Heating capacity (Max.)	4.50 (7.64)	5.50 (8.93)	7.50 (9.64)	9.50 (15.29)
	Input power (Max.)	0.949 (1.80)	1.18 (2.24)	1.69 (2.46)	2.11 (3.89)
	COP (Max.)	4.74 (4.24)	4.65 (3.99)	4.43 (3.92)	4.50 (3.93)
2°C/35°C floor heating *1	Heating capacity	4.50	5.30	6.30	9.30
	Input power	1.33	1.65	1.96	3.08
	COP	3.39	3.22	3.21	3.02
-7°C/35°C floor heating*1	Heating capacity (Max.)	4.40 (4.97)	5.00 (6.13)	5.70 (7.05)	8.90 (10.40)
	Input power (Max.)	1.59 (1.67)	1.90 (2.12)	2.13 (2.55)	3.36 (3.62)
	COP (Max.)	2.76 (2.98)	2.63 (2.89)	2.68 (2.76)	2.65 (2.87)
-7°C/55°C Radiator*1	Heating capacity (Max.)	3.90 (4.24)	4.25 (4.86)	5.30 (5.85)	8.00 (8.00)
	Input power (Max.)	2.11 (2.25)	2.25 (2.69)	2.79 (3.26)	4.10 (4.10)
	COP (Max.)	1.85 (1.88)	1.89 (1.81)	1.90 (1.79)	1.95 (1.95)
Space heating characteristics*2					
Temperature application	°C	55	35	55	35
Energy efficiency class		A++	A+++	A++	A+++
Rated heat output (P _{rated})	kW	5	5	6	7
Seasonal space heating energy efficiency (η _s)	%	125	175	125	177
Annual energy consumption	kWh	3,035	2,322	3,411	2,594
Sound power level*3	Indoor unit	40	-	40	-
	Outdoor unit	57	-	60	-
Domestic hot water characteristics*2					
Load profile		L	L	L	L
Energy efficiency class		A+	A+	A+	A+
Energy efficiency (η _{wh})	%	130	130	130	130
Annual electricity consumption	kWh	793	793	793	793
Indoor unit specifications					
Power source		Single phase, ~230 V, 50 Hz			
Dimensions H × W × D	mm	1,863 × 648 × 700	1,863 × 648 × 700	1,863 × 648 × 700	1,863 × 648 × 700
Weight (Net)	kg	145	145	145	145
Water circulation	Min./Max.	L/min	7.6/22.0	8.5/22.0	10.0/22.0
DHW tank volume	L	190	190	190	190
Electrical heater capacity	Heating	kW	3.0	3.0	3.0
	DHW	kW	1.5	1.5	1.5
Buffer tank capacity	L	16	16	16	16
Expansion vessel capacity	L	8	8	8	8
Water flow temperature range	Max.	°C	55	55	55
Water pipe connection diameter	Flow/Return	mm	Ø25.4/Ø25.4	Ø25.4/Ø25.4	Ø25.4/Ø25.4
Hot water pipe connection diameter		mm	Ø19.05	Ø19.05	Ø19.05
Outdoor unit specifications					
Power source		Single phase, ~230 V, 50 Hz			
Current	Max.	A	13.0	13.0	18.0
Dimensions H × W × D	mm	632 × 799 × 290	632 × 799 × 290	716 × 820 × 315	998 × 940 × 320
Weight (Net)	kg	39	39	42	62
Refrigerant	Type (Global Warming Potential)		R32 (675)	R32 (675)	R32 (675)
	Charge	kg	0.97	0.97	1.02
Additional refrigerant charge		g/m	25	25	20
Connection pipe	Diameter	mm	6.35	6.35	6.35
	Length	m	3/30	3/30	3/30
	Length (Pre-charge)	m	15	15	15
	Height difference	Max.	m	20	20
Operating range	Heating	°C	-20 to 35	-20 to 35	-20 to 35

*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

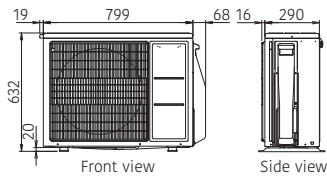
*2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

*3: The sound power level values are based on EN12102 standard measurements under EN14825 standard conditions.

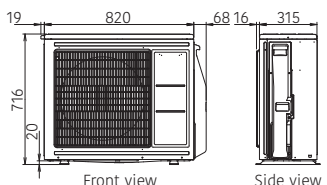
Dimensions

(Unit: mm)

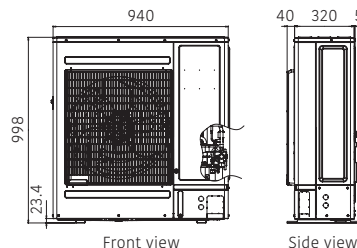
Outdoor Unit:
 WOHA060KLT



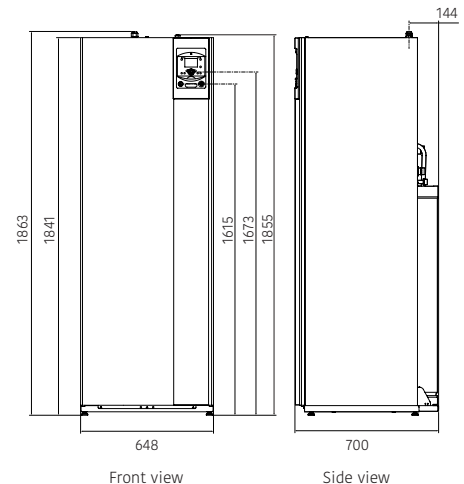
WOHA080KLT



WOHA100KLT



Indoor Unit:
 WGHA050ML3/WGHA080ML3/WGHA100ML3



AIR TO WATER

Split Type

Wall-Mounted type
High Power series



A⁺



A⁺⁺

Max
60°C

High Water Flow Temperature

The temperature of water flow can be maintained at 60°C without using a backup heater, even when the outdoor temperature drops to -20°C.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.



High Power series

High COP

Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

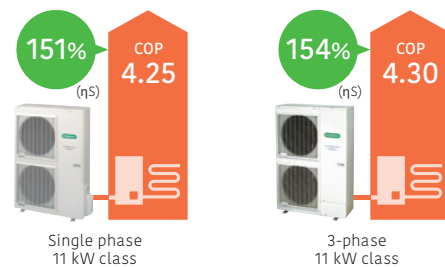
Energy efficiency
class



*Temperature application: Heating temp. 35°C

Seasonal space heating energy efficiency (η_s)

Conditions: Outdoor Temp. 7°C Heating Temp. 35°C



Indoor unit:
WSHG140DG

Outdoor unit:

WOHG112LHT / WOHG140LCTA

[3-phase] WOHK112LCTA /

WOHK140LCTA /WOHK160LCTA



Wall-mounted
Single phase/
3-phase



Outdoor unit
Single phase
11/14 kW



Outdoor unit
3-phase
11/14/16 kW

Specifications

Model Name			Indoor unit		WSHG140DG		WSHG140DG		WSHG140DG		WSHG140DG			
			Outdoor unit		WOHG112LHT		WOHG140LCTA		WOHK112LCTA		WOHK140LCTA			
Capacity range					11		14		11		14			
7°C/35°C floor heating *1	Heating capacity		kW	10.80		13.50		10.80		13.50				
	Input power			2.54		3.23		2.51		3.20				
	COP			4.25		4.18		4.30		4.22				
2°C/35°C floor heating *1	Heating capacity		kW	10.77		12.00		10.77		13.00				
	Input power			3.44		3.87		3.40		4.15				
	COP			3.13		3.10		3.17		3.13				
-7°C/35°C floor heating*1	Heating capacity		kW	10.38		11.54		10.38		12.20				
	Input power			4.32		5.08		4.28		5.13				
	COP			2.40		2.27		2.43		2.38				
-7°C/55°C Radiator*1	Heating capacity		kW	7.57		9.20		9.27		10.10				
	Input power			4.57		5.08		5.09		5.65				
	COP			1.66		1.81		1.82		1.79				
Space heating characteristics*2														
Temperature application			°C	55	35	55	35	55	35	55	35	55		
Energy efficiency class				A+	A++	A+	A+	A+	A++	A+	A+	A+		
Rated heat output (P _{rated})			kW	9	11	11	13	9	11	11	13	14		
Seasonal space heating energy efficiency (η _s)			%	112	151	113	148	112	154	117	150	149		
Annual energy consumption			kWh	6,704	6,062	8,041	6,824	6,669	5,930	7,803	6,738	7,408		
Sound power level	Indoor unit		dB(A)	46		46		46		46		46		
	Outdoor unit			68		69		69		68		71		
Indoor unit specifications														
Power source			Single phase, ~230 V, 50 Hz				3-phase, ~400 V, 50 Hz							
Dimensions H × W × D			mm	800 × 450 × 457				800 × 450 × 457						
Weight (Net)			kg	40				40						
Water circulation			Min./Max.	L/min	19.5/39.0		24.4/48.7		19.5/39.0		24.4/48.7			
Buffer tank capacity			L	16				16						
Expansion vessel capacity			L	8				8						
Water flow temperature range			Max.	°C	60				60					
Water pipe connection diameter			Flow/Return	mm	Ø25.4/Ø25.4				Ø25.4/Ø25.4					
Electrical heater capacity			heating	kW	-				-					
Outdoor unit specifications														
Power source			Single phase, ~230 V, 50 Hz				3-phase, ~400 V, 50 Hz							
Current			Max.	A	22.0		25.0		9.0		9.5			
Dimensions H × W × D			mm	1,290 × 900 × 330				1,290 × 900 × 330						
Weight (Net)			kg	92				99						
Refrigerant			Type (Global Warming Potential)	R410A (2,088)				R410A (2,088)						
Charge			kg	2.50				2.50						
Additional refrigerant charge			g/m	50				50						
Connection pipe	Diameter	Liquid	mm	Ø9.52				Ø9.52						
		Gas		Ø15.88				Ø15.88						
	Length	Min./Max.	m	5/20				5/20						
	Length (Pre-charge)		m	15				15						
Height difference	Max.	m	15				15							
Operating range			Heating	°C	-25 to 35				-25 to 35					

*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

*2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

Dimensions

(Unit: mm)

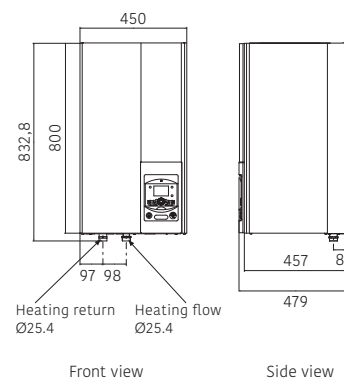
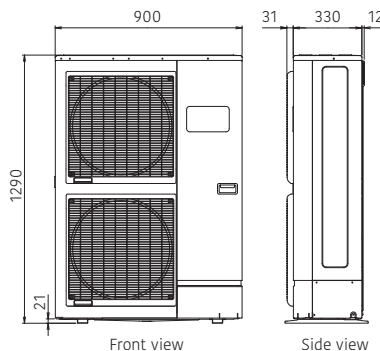
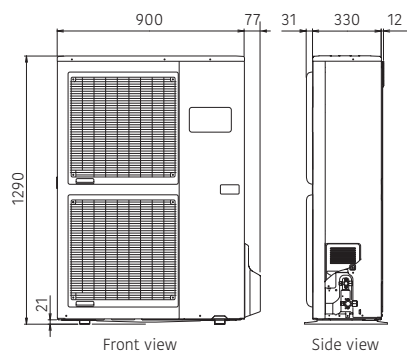
Outdoor Unit:

Single phase: WOHG112LHT/WOHG140LCTA

3-phase: WOHK112LCTA/WOHK140LCTA/WOHK160LCTA

Indoor Unit:

WSHG140DG



AIR TO WATER

Split Type

DHW Integrated type
High Power series



A⁺



A⁺⁺

Max
60°C



High Water Flow Temperature

The temperature of water flow can be maintained at 60°C without using a backup heater, even when the outdoor temperature drops to -20°C.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.



High COP

Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

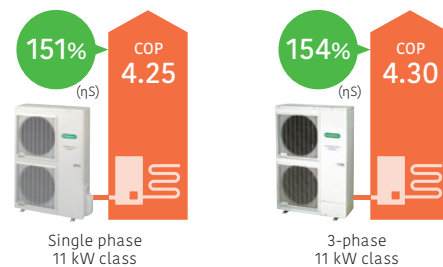
Energy efficiency
class



*Temperature application: Heating temp. 35°C

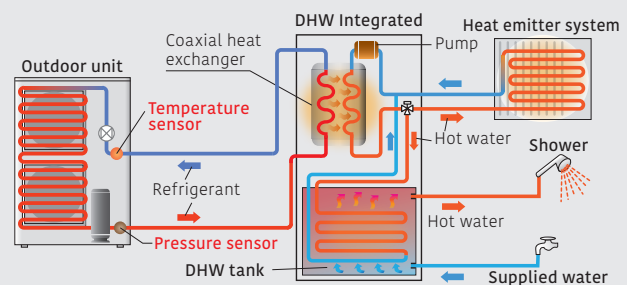
Seasonal space heating energy efficiency (η_s)

Conditions: Outdoor Temp. 7°C Heating Temp. 35°C



Optimized Refrigerant Cycle Operation

The high power series deliver high performance and efficiency with twin sensors and hot water heating technology.



Indoor unit:
WGHG140DG

Outdoor unit:

WOHG112LHT / WOHG140LCTA

**[3-phase] WOHK112LCTA / WOHK140LCTA /
WOHK160LCTA**



DHW Integrated
Single phase/
3-phase



Outdoor unit
Single phase
11/14 kW



Outdoor unit
3-phase
11/14/16 kW

Specifications

Model Name		Indoor unit		WGHG140DG		WGHG140DG		WGHG140DG		WGHG140DG		WGHG140DG		
		Outdoor unit		WOHG112LHT		WOHG140LCTA		WOHK112LCTA		WOHK140LCTA		WOHK160LCTA		
Capacity range				11		14		11		14		16		
7°C/35°C floor heating * ¹	Heating capacity	kW	10.80		13.50		10.80		13.50		15.17			
	Input power		2.54		3.23		2.51		3.20		3.70			
	COP		4.25		4.18		4.30		4.22		4.10			
2°C/35°C floor heating * ¹	Heating capacity	kW	10.77		12.00		10.77		13.00		13.50			
	Input power		3.44		3.87		3.40		4.15		4.34			
	COP		3.13		3.10		3.17		3.13		3.11			
-7°C/35°C floor heating* ¹	Heating capacity	kW	10.38		11.54		10.38		12.20		13.50			
	Input power		4.32		5.08		4.28		5.13		5.40			
	COP		2.40		2.27		2.43		2.38		2.50			
-7°C/55°C Radiator* ¹	Heating capacity	kW	7.57		9.20		9.27		10.10		11.00			
	Input power		4.57		5.08		5.09		5.65		6.29			
	COP		1.66		1.81		1.82		1.79		1.75			
Space heating characteristics* ²														
Temperature application		°C	55	35	55	35	55	35	55	35	55	35		
Energy efficiency class			A+	A++	A+	A+	A+	A++	A+	A++	A+	A+		
Rated heat output (P _{rated})		kW	9	11	11	13	9	11	11	13	13	14		
Seasonal space heating energy efficiency (η _s)		%	112	151	113	148	112	154	117	150	117	149		
Annual energy consumption		kWh	6,704	6,062	8,041	6,824	6,669	5,930	7,803	6,738	9,062	7,408		
Sound power level	Indoor unit	dB(A)	46		46		46		46		46			
	Outdoor unit		68		69		69		68		71			
Domestic hot water characteristics* ²														
Load profile			L											
Energy efficiency class			A											
Energy efficiency(η _{dw})		%	88											
Annual electricity consumption		kWh	1166											
Indoor unit specifications														
Power source			Single phase, ~230 V, 50 Hz					3-phase, ~400 V, 50 Hz						
Dimensions H × W × D		mm	1,840 × 648 × 698											
Weight (Net)		kg	150											
Water circulation		Min./Max.	L/min		19.5/39.0		24.4/28.7		19.5/39.0		24.4/48.7		27.4/54.8	
DHW tank volume		L	190											
Electrical heater capacity	Heating	kW	-					-						
	DHW		1.5											
Buffer tank capacity		L	16											
Expansion vessel capacity		L	12											
Water flow temperature range		Max.	°C		60									
Water pipe connection diameter		Flow/Return	mm		Ø25.4/Ø25.4									
Hot water pipe connection diameter		mm	Ø19.05											
Outdoor unit specifications														
Power source			Single phase, ~230 V, 50 Hz					3-phase, ~400 V, 50 Hz						
Current		Max.	A		22.0		25.0		9.0		9.5		10.5	
Dimensions H × W × D			mm		1,290 × 900 × 330									
Weight (Net)		kg	92					99						
Refrigerant		Type (Global Warming Potential)	R410A (2,088)											
		Charge	kg		2.50									
Additional refrigerant charge			g/m		50									
Connection pipe	Diameter	Liquid	mm		Ø9.52									
		Gas	mm		Ø15.88									
	Length	Min./Max.	m		5/20									
	Length (Pre-charge)	m		15										
	Height difference	Max.	m		15									
Operating range		Heating	°C		-25 to 35									

*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

*2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

Dimensions

(Unit: mm)

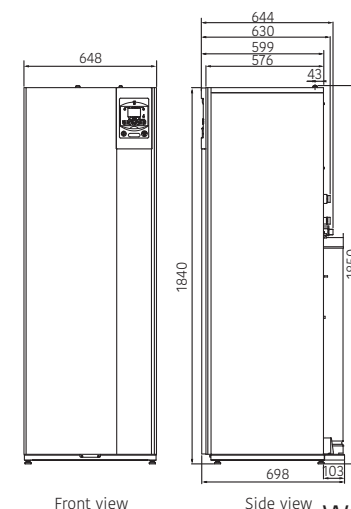
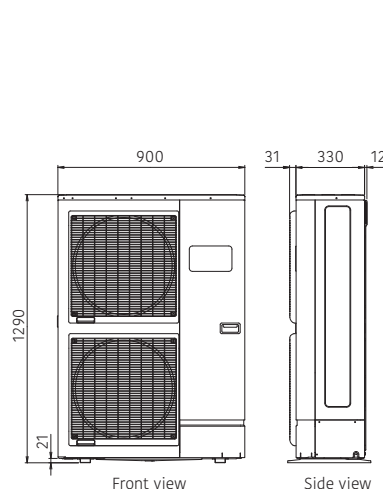
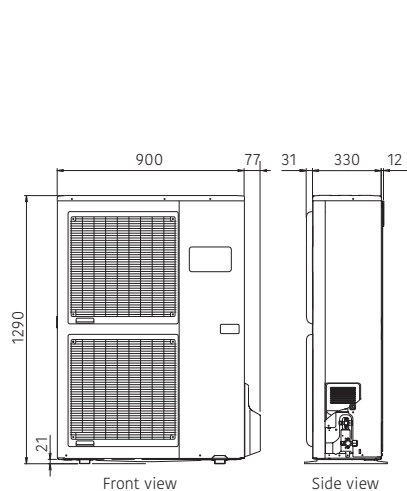
Outdoor Unit:

Single phase: WOHG112LHT/WOHG140LCTA

3-phase: WOHK112LCTA/WOHK140LCTA/WOHK160LCTA

Indoor Unit:

WGHG140DG



AIR TO WATER

Split Type

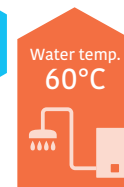
Wall-Mounted type
Super High Power series



High Water Flow Temperature

The temperature of water flow can be maintained at 60°C without using a backup heater, even when the outdoor temperature drops to -20°C. The system can supply 55°C water without a backup heater at an outdoor temperature of -22°C.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.



Super High Power series

High COP

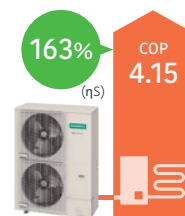
Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

Energy efficiency class



Seasonal space heating energy efficiency (η_s)

Conditions: Outdoor Temp. 7°C Heating Temp. 35°C



Single phase
16 kW class

Operating Range extended to -25°C

Operating range improved down to -25°C outdoor temperature



Indoor unit:
WSHG160DJ6
Outdoor unit:
WOHG160LJL



Specifications

Model Name		Indoor unit		WSHG160DJ6	
		Outdoor unit		WOHG160LJL	
Capacity range				16	
7°C/35°C floor heating * ¹	Heating capacity	kW	16.00		
	Input power		3.86		
	COP		4.15		
2°C/35°C floor heating * ¹	Heating capacity	kW	13.30		
	Input power		4.25		
	COP		3.13		
-7°C/35°C floor heating* ¹	Heating capacity	kW	14.50		
	Input power		5.27		
	COP		2.75		
-7°C/55°C Radiator* ¹	Heating capacity	kW	10.90		
	Input power		5.89		
	COP		1.85		
Space heating characteristics* ²					
Temperature application		°C	55	35	
Energy efficiency class			A++	A++	
Rated heat output (P _{rated})		kW	14	16	
Seasonal space heating energy efficiency (η _s)		%	125	163	
Annual energy consumption		kWh	8,757	8,014	
Sound power level	Indoor unit	dB(A)	45	45	
	Outdoor unit		67	66	
Indoor unit specifications					
Power source		Single phase, ~230 V, 50 Hz			
Dimensions H × W × D		mm	805 × 450 × 471		
Weight (Net)		kg	52.5		
Water circulation	Min./Max.	L/min	26.4/57.8		
Buffer tank capacity		L	22		
Expansion vessel capacity		L	10		
Water flow temperature range	Max.	°C	60		
Water pipe connection diameter		Flow/Return	Ø25.4/Ø25.4		
Electrical heater capacity		Heating	6.0 (3.0 kW × 2 pcs.)		
Outdoor unit specifications					
Power source		Single phase, ~230 V, 50 Hz			
Current	Max.	A	28.0		
Dimensions H × W × D		mm	1,428 × 1,080 × 480		
Weight (Net)		kg	137		
Refrigerant		Type (Global Warming Potential)	R410A (2,088)		
Additional refrigerant charge		Charge	kg	3.80	
			g/m	50	
Connection pipe	Diameter	Liquid	mm	Ø9.52	
		Gas	mm	Ø15.88	
	Length	Min./Max.	m	5/30	
		Length (Pre-charge)	m	15	
Height difference	Max.	m	25/15 (Outdoor unit: Upper/Lower)		
		Heating	°C	-25 to 35	

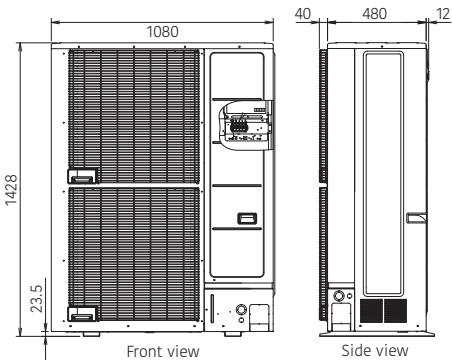
*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

*2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

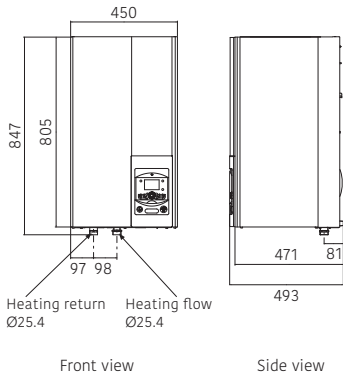
Dimensions

(Unit: mm)

Outdoor Unit:
WOHG160LJL



Indoor Unit:
WSHG160DJ6



AIR TO WATER

Split Type

DHW Integrated type
Super High Power series



A⁺⁺



A⁺⁺

Max
60°C

High Water Flow Temperature

The temperature of water flow can be maintained at 60°C without using a backup heater, even when the outdoor temperature drops to -20°C. The system can supply 55°C water without a backup heater at an outdoor temperature of -22°C.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.

Outdoor temp.
-20°C

Water temp.
60°C



Super High Power series

High COP

Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

Energy efficiency
class

A⁺⁺

Seasonal space heating energy efficiency (η_s)

Conditions: Outdoor Temp. 7°C Heating Temp. 35°C

163%
(η_s)

COP
4.15



Single phase
16 kW class

Operating Range extended to -25°C

Operating range improved down to -25°C outdoor temperature



Stylish space saving solution with
**Built-in High-performance
DHW tank 190 L**



- Coil heat exchanger optimizes DHW supply performance.
- Temperature rises quickly due to the large surface of the exchanger.

Indoor unit:
WGHG160DJ6
Outdoor unit:
WOHG160LJL



DHW Integrated
Single phase



Outdoor unit
Single phase 16 kW

Specifications

Model Name		Indoor unit		WGHG160DJ6	
		Outdoor unit		WOHG160LJL	
Capacity range				16	
7°C/35°C floor heating * ¹	Heating capacity	kW	16.00		
	Input power		3.86		
	COP		4.15		
2°C/35°C floor heating * ¹	Heating capacity	kW	13.30		
	Input power		4.25		
	COP		3.13		
-7°C/35°C floor heating* ¹	Heating capacity	kW	14.50		
	Input power		5.27		
	COP		2.75		
-7°C/55°C Radiator* ¹	Heating capacity	kW	10.90		
	Input power		5.89		
	COP		1.85		
Space heating characteristics* ²					
Temperature application		°C	55	35	
Energy efficiency class			A++	A++	
Rated heat output (P _{rated})		kW	14	16	
Seasonal space heating energy efficiency (η _s)		%	125	163	
Annual energy consumption		kWh	8,757	8,014	
Sound power level	Indoor unit	dB(A)	45	45	
	Outdoor unit		67	66	
Domestic hot water characteristics* ²					
Load profile			L		
Energy efficiency class			A		
Energy efficiency (η _{nwh})		%	109		
Annual electricity consumption		kWh	941		
Indoor unit specifications					
Power source			Single phase, ~230 V, 50 Hz		
Dimensions H × W × D		mm	1,841 × 648 × 698		
Weight (Net)		kg	166		
Water circulation		Min./Max.	L/min	26.4/57.8	
DHW tank volume			L	190	
Electrical heater capacity	Heating	kW	6.0 (3.0 kW × 2 pcs.)		
	DHW		1.5		
Buffer tank capacity			L	22	
Expansion vessel capacity			L	12	
Water flow temperature range		Max.	°C	60	
Water pipe connection diameter		Flow/Return	mm	Ø25.4/Ø25.4	
Hot water pipe connection diameter			mm	Ø19.05	
Outdoor unit specifications					
Power source			Single phase, ~230 V, 50 Hz		
Current		Max.	A	28.0	
Dimensions H × W × D			mm	1,428 × 1,080 × 480	
Weight (Net)			kg	137	
Refrigerant	Type (Global Warming Potential)	R410A (2,088)			
	Charge		kg	3.80	
Additional refrigerant charge			g/m	50	
Connection pipe	Diameter	Liquid	mm	Ø9.52	
		Gas		Ø15.88	
	Length	Min./Max.	m	5/30	
	Length (Pre-charge)		m	15	
Height difference	Max.	m	25/15 (Outdoor unit: Upper/Lower)		
	Heating	°C	-25 to 35		

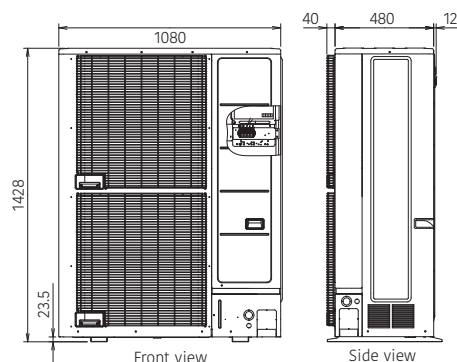
*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

*2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

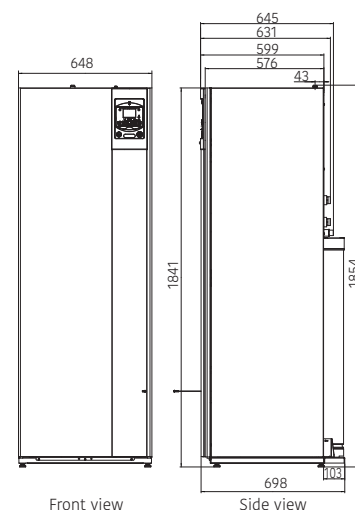
Dimensions

(Unit: mm)

Outdoor Unit:
WOHG160LJL



Indoor Unit:
WGHG160DJ6



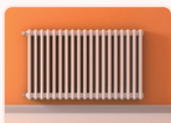
Indoor Unit

Type-A

Type-B

Selecting the indoor unit

- This is a device for storing hot water and circulating it to housing equipment.
- Selection criteria for the indoor unit is which housing equipment it will be connected to, such as a radiator or shower.
- Indoor unit you choose will also depend on whether you already own devices such as a pump or tank.



Radiator, Fan coil



Shower, Bath



Under floor heating



Domestic hot water



What Each Indoor Unit Can Do



Indoor unit control box*

If you want to update your system by reusing your existing pump and buffer tank, etc., you can do so by installing only the control box.



Indoor unit Wall-mounted

Stands for preparation of heating water for under floor heating and radiators. It can optionally operate with domestic hot water tank.



Indoor unit Domestic Hot Water (DHW) integrated

Can be used with a variety of heating systems, including under floor heating and radiators. Space saving heating and DHW supply in a single indoor unit.

*The control box can only be selected for Monobloc outdoor unit.

AIR TO WATER

Types of Indoor Units



Compatibility
for Monobloc type Comfort series



Indoor unit type	Control box	Wall-mounted	DHW integrated
Housing Equipment			
Under floor heating	○	●	●
Radiator	○	●	●
Fan coil	○	●	●
Bath	○	○	●
Shower	○	○	●
Hot Water	○	○	●



Compatibility
for Split type
Comfort series, High power series
Super high power series



Indoor unit type	Wall-mounted	DHW integrated
Housing Equipment		
Under floor heating	●	●
Radiator	●	●
Fan coil	●	●
Bath	○	●
Shower	○	●
Hot water	○	●

● : It can be used by constructing a system using options and carrying out water pipe work.
○ : It can be used by constructing a system using options and carrying out water pipe work, by reusing (or locally procuring) existing pumps and tanks, etc.
Housing Equipment requires the preparation of separately sold products.

Type-A

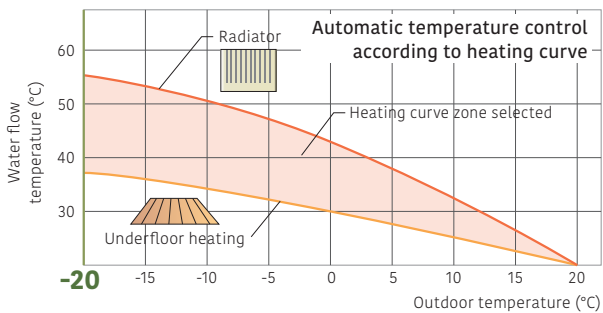
Comfort Control

Useful Features

Flow temperature control with climate compensation

Automatic Heating Curve Control

Automatic temperature regulation according to heating curve (depending on heating terminal and outdoor temperature)



Auto Changeover

When Auto mode is selected, the system automatically switches between cooling and heating modes depending on the outdoor temperature to serve as an all-season air conditioner.



Quick Recovery from Defrosting

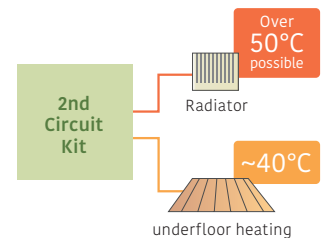
Maintains room temperature by boost start operation during defrosting.

2-zone Independent Control

2-zone independent control (For example, the individual control of 2 underfloor heating zones or the combination of 1 underfloor heating zone and 1 radiator zone)*1*2

*1: Optional parts such as 2-zone kits, 3-zone kits, and thermostats are required

*2: 3 Zones can be controlled in the Control Box



Backup Heater Operation

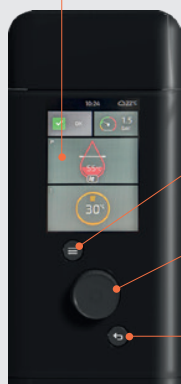
Backup heater maintains a comfortable room temperature even when the outside temperature is low. The backup heater is intelligently controlled as a safety backup for very cold days and nights, and only operates when really needed.

Controller with a clear color display and simple icons for easy function settings

Color display

Shows all the information items related to the operation mode:

WLAN Connectivity / Operation / Pressure / Set temperature (DHW/ Flow) Clock / Message / Service maintenance



Operation indicator
Fixed white: Normal operation
Flashing orange: Error

Menu access button

Navigation knob:
Rotation: Menu navigation
Press: Validation

Back button

Main operation flow and settings for installers and end users

	Flow Chart	Example Item
Installers	1 Install Settings	Pump speed setting, Configuration, Heating curve setting, Heat pump shut off
	2 Option Settings	Cooling Kit, DHW Kit, Boiler Kit
	3 Convenient Function	Automatic heating curve settings, Underfloor controlled driving, Outdoor temperature adjustment, Maintenance period settings
	4 Workout Settings	Outdoor temperature simulator
	5 Confirmation	Checking operation (Heating and cooling, DHW, option)
End users	6 User Settings	Date and time, Time program, Operation temperature settings

Energy Saving

Away mode

It will set heating and DHW mode to the frost protection* during the selected period:

-If you activate away mode on HMI: You can choose start and end time/date.

-If you activate away mode on Room thermostat (option): You can choose start and end time/date, as well as room setpoint during away period.

*: The protection mode automatically prevents an excessively sharp drop in room temperature.

Safety Features

Anti-freeze function

When the outside temperature drops below a specified level, the outdoor unit water pump will self-activate and water will also be automatically circulated to prevent freezing.

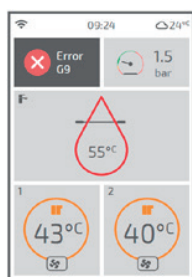
Easy Installation & Maintenance

- All hydraulic safety and control components are built in with no additional selection required.
- Easy access for maintenance
- Refrigerant pump down operation

Error and Maintenance Alarm

Enables quick error-handling services and maintenance

✖ Error ⚠ Warning



Maintenance Support

Diagnostics functions for troubleshooting

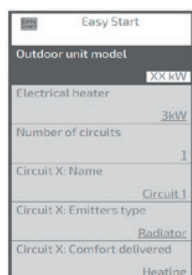


In the event of an error, please note down the number and consult your heating engineer.

Easy to Set Up

Easy Start

Choose language, set date and time. Answer questions from Easy Start.



Remote Connectivity and Control

Via app "Cozy tough", you can manage and control of electric heaters, electric water heaters, heat pump water heaters, heat pumps.

* Cozytouch is a service of Group Atlantic



Type-A

Optional Parts & Control Overview

To meet the diverse needs of customers, we offer a variety of control options, such as individual control and remote control options.

for Locally units



UTW-KZSXQ

Second Circuit Kit

It can supply hot water at different temperatures to each two types of heating equipment, such as radiators and underfloor heating.



(×2)



UTW-KZC2XQ



(×1)



UTW-KZDXQ

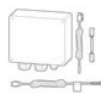
Boiler Connection Kit

It can build hybrid systems using both boilers and heat pumps. Boiler and heat pumps are switched according to outside air temperature.



UTW-KBCXQ

for DHW



UTW-KDWXQ



UTW-KDWCXQ

DHW Kit

Required to connect locally purchased DHW tanks to Air to Water.



DHW tank

200 Liters: UTW-T20AXH / UTW-T20BXH
300 Liters: UTW-T30AXH / UTW-T30BXH
The BXH series is a more efficient tank than the AXH series.



DHW Expansion Kit

UTW-KDEXQ

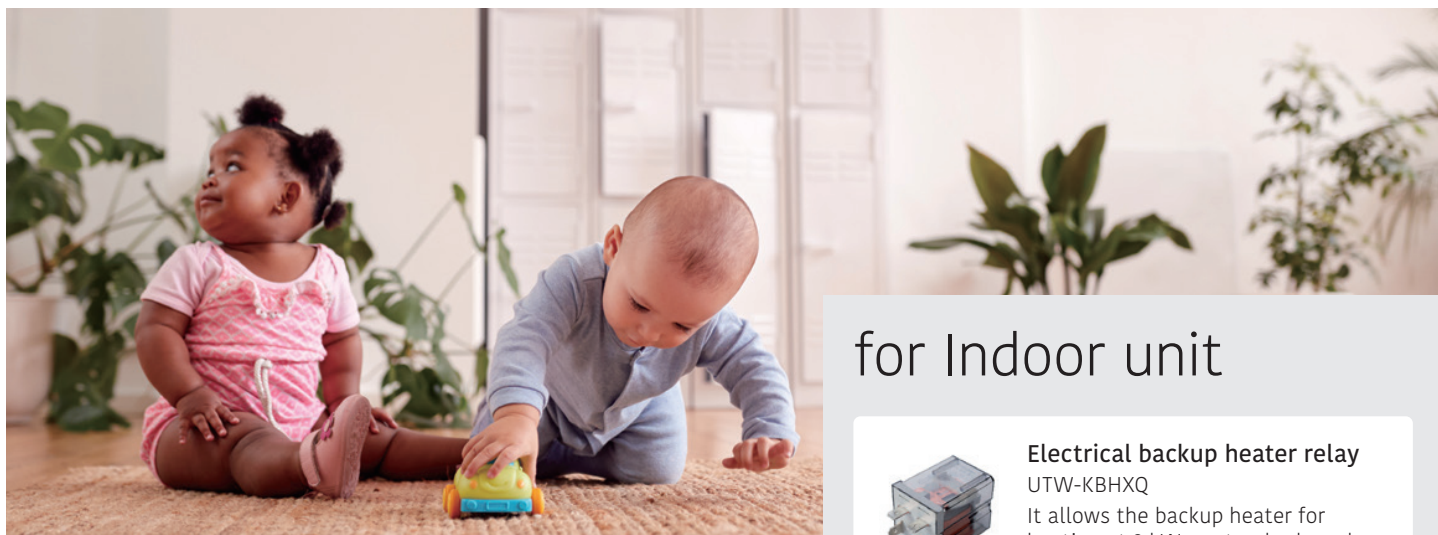
The expansion vessel(18L) for connection to DHW water pipe.

Service & Maintenance Tool

Service Monitor Tool

UTY-ASSXZ1





for Indoor unit



Electrical backup heater relay UTW-KBHXQ

It allows the backup heater for heating at 3 kW as standard can be used at 6 kW.

for Outdoor unit



Drain pan UTW-KDPXQ

It is used to collect and drain condensation water generated by outdoor unit.



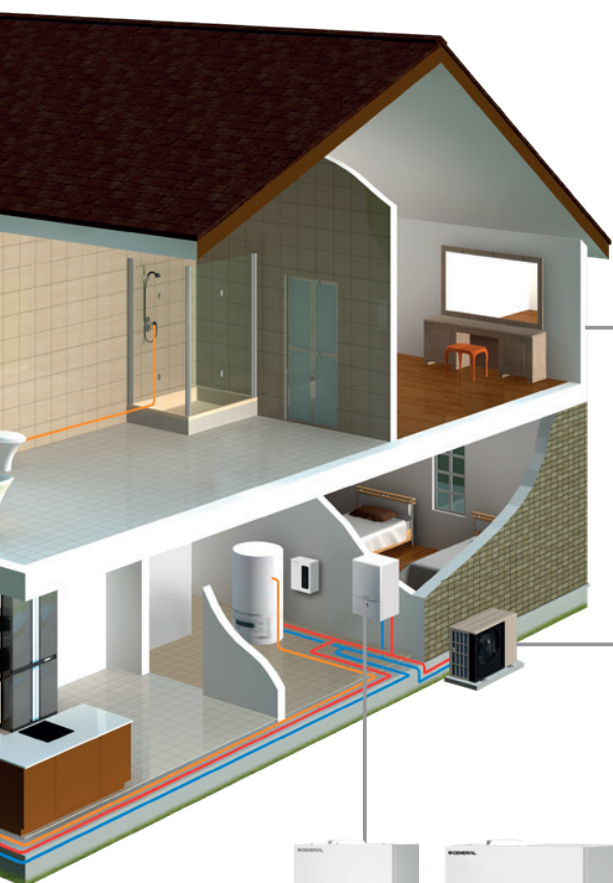
Antivibration Rubber feet UTW-KARXQ

It reduces vibration caused by the operation of compressors and other equipment, and suppresses the generation of noise.



Antifreezing valve for Monobloc UTW-KAVXQ

When water pipes freeze, the internal pressure increases and the pipes are purged to prevent parts from breaking.



Wall-mounted



Indoor unit
Controller



DHW
Integrated

Monobloc type Comfort series

Individual Control

Room thermostat

An optional wireless thermostat allows remote control of the ATW system away from the indoor unit. Can also be operated from mobile apps.



Wired power supply
UTW-C225XQ



Battery power supply
UTW-C228XQ

Cozy tough (Application)

* Cozytouch is a service of Group Atlantic



Type-A Optional Parts List

Product Name		Model Name	Monobloc Type			
			Comfort series			
			1Ø			
			Controll Box	Wall-mounted	DHW Integrated	Outdoor Unit
Second Circuit Kit		UTW-KZSXQ		●*		
DHW Kit		UTW-KDWXQ		●		
Second Circuit Kit		UTW-KZDXQ			●*	
DHW Loop Kit		UTW-KDLXQ			●	
DHW Expansion Kit		UTW-KDEXQ			●	
Outdoor temperature sensor		UTW-KESXQ	●	●	●	
Condensation detection sensor		UTW-KCDXQ	●	●	●	
Regulation Extension Kit		UTW-KREXQ	●	●	●	
Electrical Backup heater relay		UTW-KBHXQ		●	●	
Room thermostat	Wired power supply 	UTW-C225XQ	●	●	●	
	Battery power supply 	UTW-C228XQ	●	●	●	
	Cover Plate for thermostat 	UTW-KCPXQ	●	●	●	
Drain pan		UTW-KDPXQ				●
Antivibration Rubber feet		UTW-KARXQ				●
Antifreezing valve for Monobloc		UTW-KAVXQ				●

Product Name		Model Name	Monobloc Type			
			Comfort series			
			1Ø			
			Contoll Box	Wall-mounted	DHW Integrated	Outdoor Unit
Single Circuit Kit	 (×1)	UTW-KZC1XQ	•			
Second Circuit Kit	 (×2)	UTW-KZC2XQ	•			
	 (×1)					
Third Circuit Kit	 (×3)	UTW-KZC3XQ	•			
	 (×2)					
	 (×1)					
Boiler Connection Kit		UTW-KBCXQ	•			
DHW Kit		UTW-KDWCXQ	•			
Backup Heater Kit		UTW-HB6CXQ	•			
DHW tank	200 Liters 300 Liters 	UTW-T20AXH UTW-T30AXH	•	•		
	200 Liters 300 Liters 	UTW-T20BXH UTW-T30BXH	•	•		

*1: Regulation extension kit (UTW-KREXQ) is not included but is required for connection.

Type-**B**

Comfort Control

The high-grade heating controller automatically adjusts the flow temperature according to the climate conditions to maintain the room and domestic hot water temperatures at the desired levels.

Indoor unit Controller

4 Heating modes

1. Automatic mode

Enables automatic switching between Comfort mode and Reduce mode according to time program

2. Reduce mode

Maintains water temperature at a lower level

3. Comfort mode

Maintains water temperature at a comfortable level

4. Protection mode

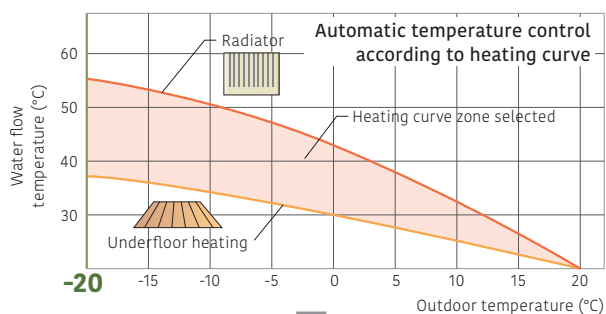
Activates frost protection in standby operation



Useful Features

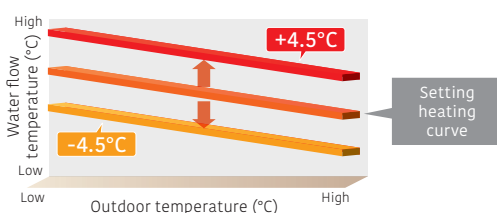
Automatic Heating Curve Control

Automatic temperature regulation according to heating curve (depending on heating terminal and outdoor temperature)



The heating curve will shift to adjust the room temperature setting.

Can be fine-adjusted when it is too warm or too cold.



Quick Recovery from Defrosting

Maintains room temperature by boost start operation during defrosting.

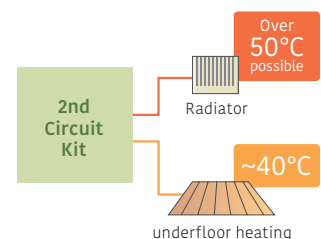
Auto Changeover

When cooling mode is selected, the system automatically switches between cooling and heating modes depending on the outdoor temperature to serve as an all-season air conditioner.

2-Zone Independent Control

2-zone independent control (For example, the individual control of 2 underfloor heating zones or the combination of 1 underfloor heating zone and 1 radiator zone)*1

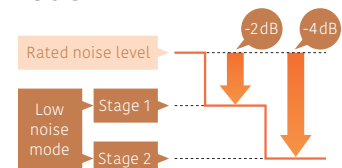
*1: Optional parts required



2-Stage Low-Noise Mode

The outdoor unit can be switched to quiet mode, depending on the installation environment.

*Effective only for high power series



Backup Heater Operation

Backup heater maintains a comfortable room temperature even when the outside temperature is low. The backup heater is intelligently controlled as a safety backup for very cold days and nights, and only operates when really needed.

* Optional parts is needed for high power series.

Energy Saving

Time Program

- The timer is easy to set.
- You can select the heating mode in conjunction with various times of the day.

Day-weekly timer

- Allows up to 3 settings per day.
- Allows individual settings for each day of the week.

Holiday timer

- Allows up to 8 settings.
- While you are away from home for an extended period during winter, the system prevents your room or house from freezing.

Peak Cut Function*2

Sets the peak current value to reduce power consumption.

Mode	Ratio to reduce power consumption
1	100%
2	75%
3	50%
4	Almost 0%

* Please refer to page W-054 and W-055 for optional parts information.



Safety Features

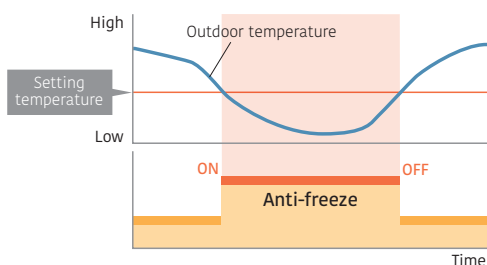
Anti-Legionella Function

Prevents the growth of Legionella bacteria in the DHW tank to supply safe and clean hot water at all times.



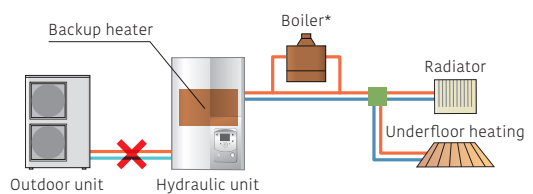
Anti-Freeze Function

When the outside temperature drops below a specified level, the compressor will self-activate and water will also be automatically circulated to prevent freezing.



Emergency Operation

If an outdoor unit fails to operate, a built-in backup heater or an external boiler is activated to supply an uninterrupted supply of hot water to the house.



Error and Maintenance Alarm

Enables quick error-handling services and maintenance

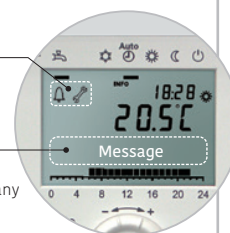


Error



Maintenance

- Error history saves 10 errors in memory
- Display telephone number of service company

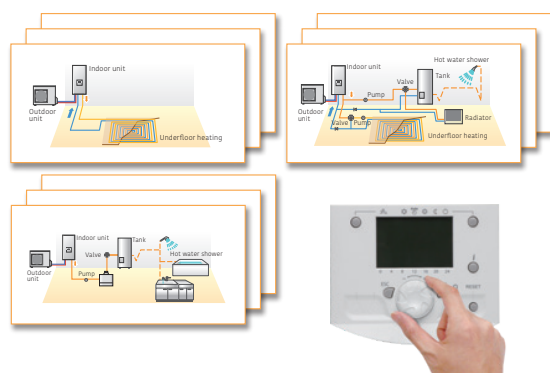


Type-B

Simple Installation

Presetting Configurations

A controller installed makes it easy to configure the system without having to set each component or unit individually.



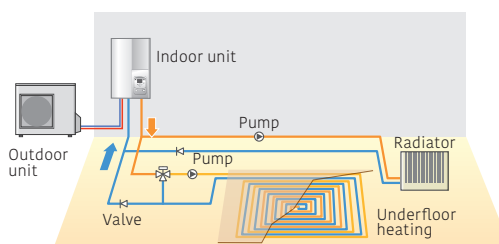
8 simple patterns for system presetting
(Pair of heating: 12 patterns)

Configuration (Parameter 5700)	Installation type
Presetting 1	1 heating circuit
Presetting 2	2 heating circuits
Presetting 3	1 heating circuit with boiler backup
Presetting 4	2 heating circuits with boiler backup
Presetting 5	1/2 heating circuit with buffer control
Presetting 6	1/2 heating circuit with buffer control and boiler backup
Presetting 7	Cascade connection Primary
Presetting 8	Cascade connection A
Presetting 9	Cascade connection B/C

- DHW & solar control auto detection
- Cascade connection only available in High Power models.

Outdoor Temperature Simulation

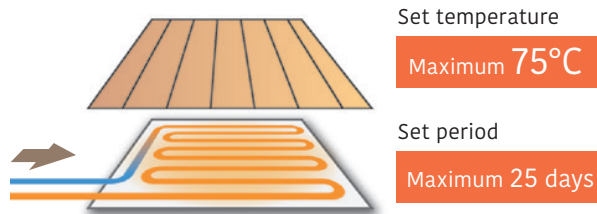
It verifies that each unit operates properly under the set conditions and expected outdoor air temperature when the system is actually assembled.



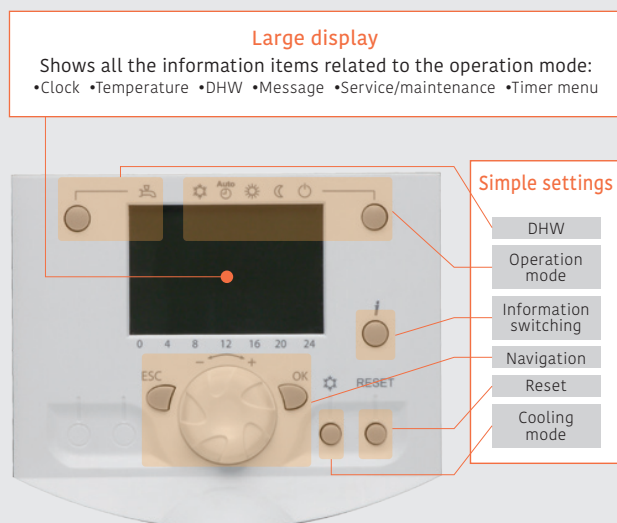
The outdoor temperatures can be simulated in the range of -50°C to +50°C.

Concrete Floor Drying

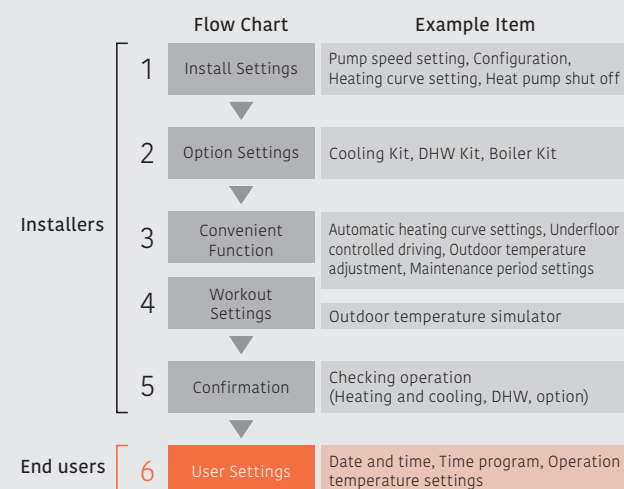
Allows the concrete surrounding the hot-water pipes to dry more quickly, shortening the construction period for underfloor heating installations.



Controller with a large liquid crystal display and buttons for easy function settings



Main operation flow and settings for installers and end users

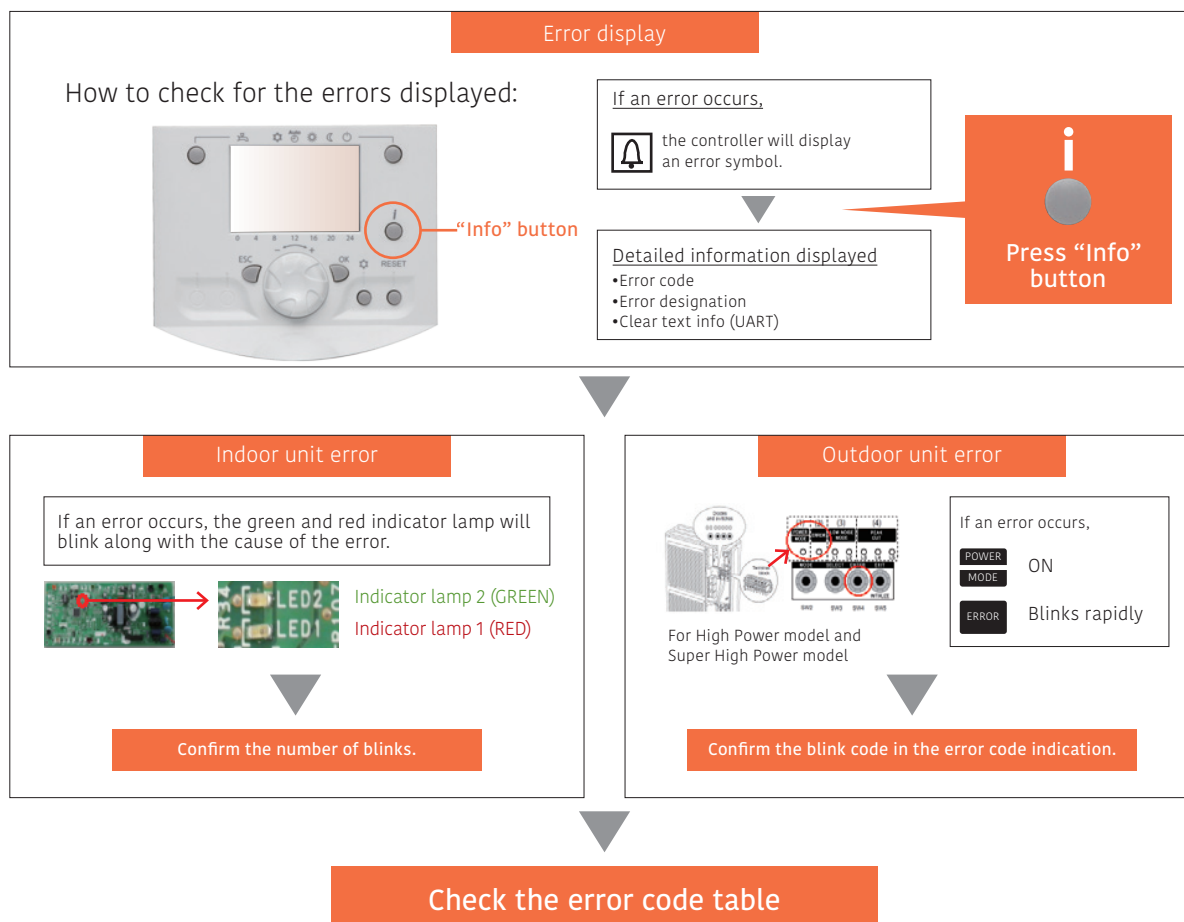


Easy Installation & Maintenance

- All hydraulic safety and control components are built in with no additional selection required.
- Lifting bars for installation free of difficulty or risk
- Easy access for maintenance
- Refrigerant pump down operation

Maintenance Support

Diagnostics functions for troubleshooting



Type-**B**

Control Overview

To meet the diverse needs of customers, we offer a variety of control options, such as individual control and remote control options.

Individual Control



Wireless room thermostat (option)
UTW-C58XA



Wired room thermostat (option)
UTW-C55XA

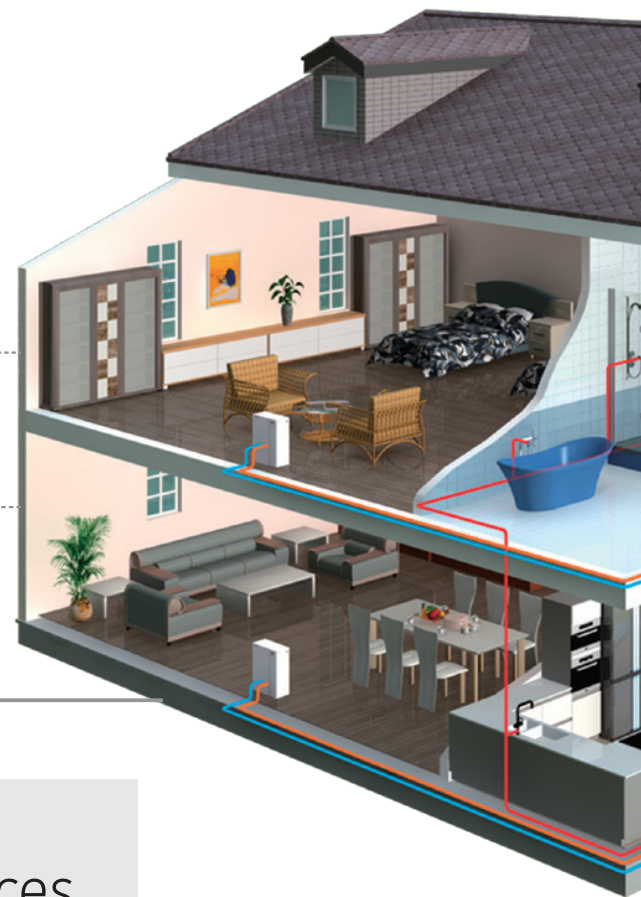


Wired remote controller (option)
UTW-C74TXF*¹
UTW-C74HXF*¹

RF module



UTW-MRCXD



Adapters for External Devices



Web server (option)
UTW-KW1XD
UTW-KW4XD



MODBUS® clip (option)
UTW-KMBXJ*²

Internet



Remote control system



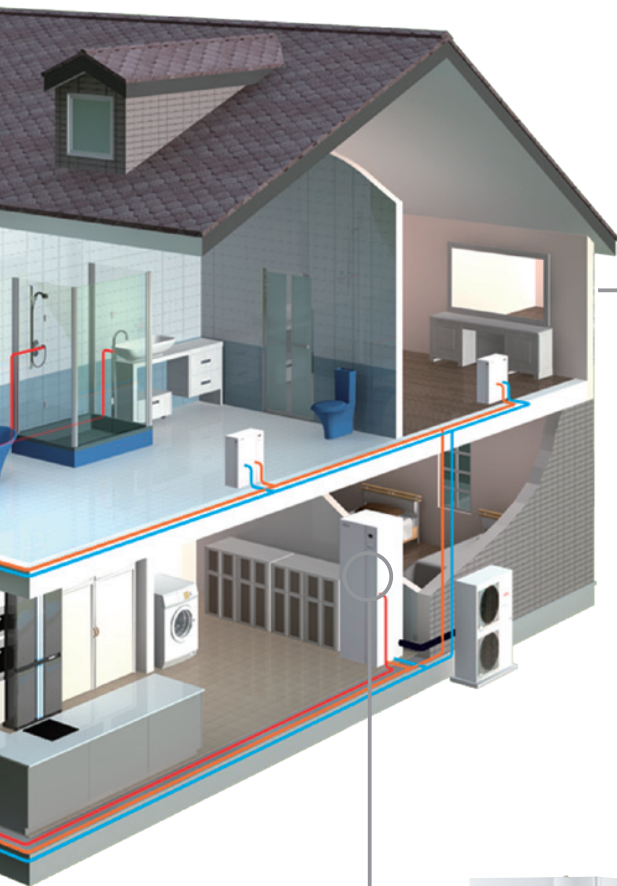
Smart device control



Home automation system

* Please refer to page W-038 and W-039 for system compatibility information.





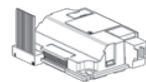
Super High Power series
Indoor unit

Service & Maintenance Tool



Web server (option)
UTW-KW1XD
UTW-KW4XD

or



LPB clip (option)
UTW-KL1XD

Service tool (option)



UTW-KPSXD*³
software



UTW-KSTXD*⁴

*3: UTW-KW1XD or UTW-KW4XD is required for the connection.
*4: UTW-KL1XD is required for the connection.

Indoor unit Controller

Easy-to-set operation modes

- Selecting the heating mode and domestic hot water (DHW) operation

Large liquid crystal display

- Shows operation status
- Shows error messages
- Messages in plain text

Navigation and settings

- Select from heating menu
- Setting Time program



HMI Kit (option)
UTW-KHMXE
Supports multiple languages

Type-**B**

Optional Parts Overview

Various optional parts are available to use ATW according to needs and environments.

for Locally units



UTW-KZSXE*1

Second Circuit Kit

It can supply hot water at different temperatures to each two types of heating equipment, such as radiators and underfloor heating.



UTW-KZDXE*1



UTW-KZSXJ



UTW-KZDXJ

Boiler Connection Kit

It can build hybrid systems using both boilers and heat pumps. Boiler and heat pumps are switched according to outside air temperature.



UTW-KBSXD

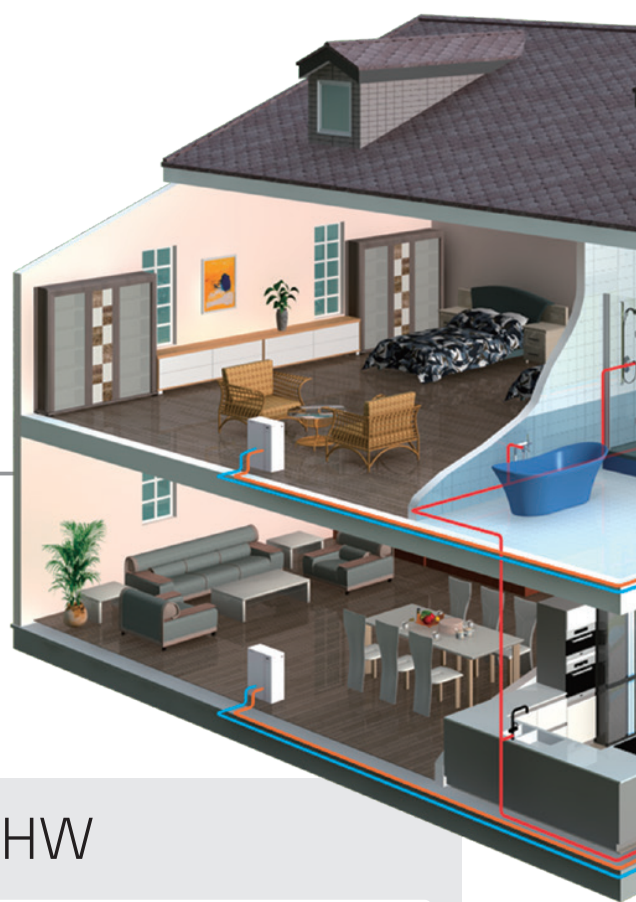


UTW-KBDXD



UTW-KBSXJ

*1: The UTW-KREXD (Regulation Extension Kit) is not included but is required for connection.



for DHW



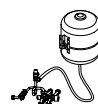
DHW Kit

UTW-KDWXD (External)
Required to connect locally purchased DHW tanks to Air to Water.



DHW tank

200 Liters: UTW-T20AXH / UTW-T20BXH
300 Liters: UTW-T30AXH / UTW-T30BXH
The BXH series is a more efficient tank than the AXH series.



UTW-KDEXE

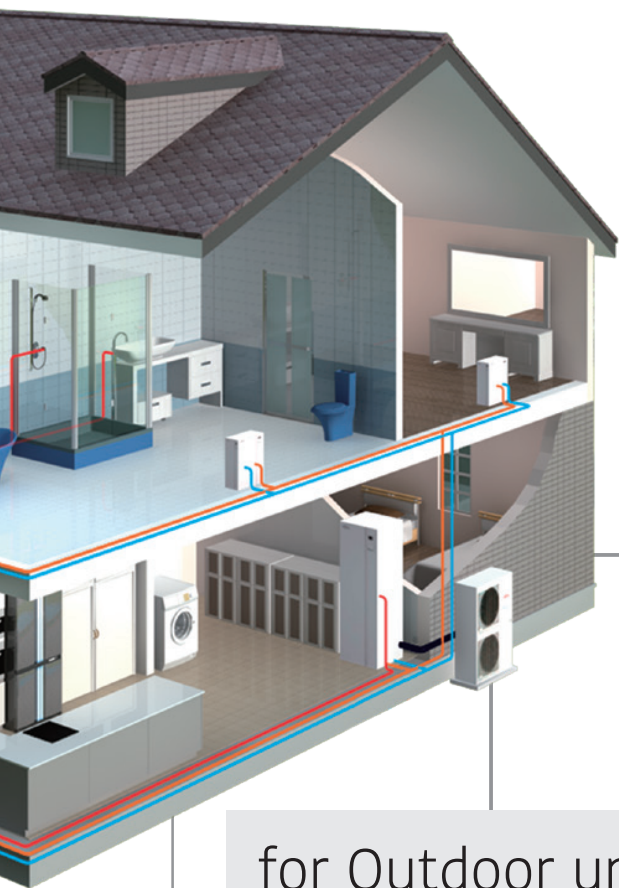


UTW-KDEXL

DHW Expansion Kit

The expansion vessel(18L) for connection to DHW water pipe.





for Indoor unit



Circulating pump

UTW-PHFXG

The high-output pump for replacement of the standard pump in the hydraulic unit. It can be used in properties with longer and more complex water pipe.

Cascade Master/Slave Kit

Up to 3 indoor units can be connected for large-capacity use. It is needed to install a primary kit in one unit and a secondary kit in one or two other units.



Cascade Master Kit
(incl. LPB clip)



Cascade Slave Kit
(incl. LPB clip)

Cooling Kit

Required when using ATW also for cooling operation. It is used to prevent condensation occurring in the indoor unit.



UTW-KCLXD



UTW-KCLXL

for Outdoor unit



Drain pan

UTW-KDPXB

It is used to collect and drain condensation water generated by outdoor unit.



External Connection Kit

UTY-XWZXZ2 / UTY-XWZXZ3

The signal input (low noise mode, peak cut) and signal output (compressor operation, base pan heater control) for outdoor unit are possible externally.



Electrical backup heater relay

UTW-KBHL

It allows the backup heater for heating at 3 kW as standard can be used at 6 kW.

Type-B Optional Parts List

Product Name		Model Name	Split Type										Split DHW Integrated Type											
			Super High Power		High Power			R32 Comfort					Super High Power		High Power					R32 Comfort				
			1Ø		1Ø	3Ø		1Ø				1Ø		1Ø	3Ø			1Ø						
			16		11	14	11	14	16	5	6	8	10	16		11	14	11	14	16	5	6	8	10
Second Circuit Kit		UTW-KZSXE	—		● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	—		—	—	—	—	—	—	—	—	—	—
		UTW-KZDXE	—		—	—	—	—	—	—	—	—	—		● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	● ⁺¹	
		UTW-KZSXJ	●		—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—	
		UTW-KZDXJ	—		—	—	—	—	—	—	—	—	●		—	—	—	—	—	—	—	—	—	
Boiler Connection Kit		UTW-KBSXD	—		●	●	●	●	●	●	●	●	—		—	—	—	—	—	—	—	—	—	
		UTW-KBDXD	—		—	—	—	—	—	—	—	—	—		●	●	●	●	●	●	●	●	●	
		UTW-KBSXJ	●		—	—	—	—	—	—	—	—	●		—	—	—	—	—	—	—	—	—	
Balancing vessel		UTW-TEVXA	●		●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	
DHW Kit		UTW-KDWXD (External)	●		●	●	●	●	●	●	●	●	—*2		—*2	—*2	—*2	—*2	—*2	—*2	—*2	—*2	—*2	
DHW tank	200 Liters 300 Liters 	UTW-T20AXH UTW-T30AXH	●		●	●	●	●	●	●	●	●	—*2		—*2	—*2	—*2	—*2	—*2	—*2	—*2	—*2	—*2	
	200 Liters 300 Liters 	UTW-T20BXH UTW-T30BXH	●		●	●	●	●	●	●	●	●	—*2		—*2	—*2	—*2	—*2	—*2	—*2	—*2	—*2	—*2	
DHW Expansion Kit		UTW-KDEXE	—		—	—	—	—	—	—	—	—	●		●	●	●	●	●	—	—	—	—	
		UTW-KDEXL	—		—	—	—	—	—	—	—	—	—		—	—	—	—	—	●	●	●	●	
Circulating pump		UTW-PHFXG	●		●	●	●	●	●	—	—	—	●		●	●	●	●	●	—	—	—	—	
Cooling Kit		UTW-KCLXD	●		●	●	●	●	●	●	●	●	●		●	●	●	●	●	—	—	—	—	
		UTW-KCLXL	—		—	—	—	—	—	—	—	—	—		—	—	—	—	—	●	●	●	●	
Regulation Extension Kit		UTW-KREXD	●		●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	
Drain pan		UTW-KDPXB	—		—	—	—	—	—	●	●	●	—		—	—	—	—	—	●	●	●	—	
Cascade Master Kit (incl. LPB clip)		UTW-KCMXE	—		●	●	●	●	●	—	—	—	—		—	—	—	—	—	—	—	—	—	
Cascade Slave Kit (incl. LPB clip)		UTW-KCSXE	—		●	●	●	●	●	—	—	—	—		—	—	—	—	—	—	—	—	—	

Product Name	Model Name	Split Type										Split DHW Integrated Type									
		Super High Power		High Power				R32 Comfort				Super High Power		High Power				R32 Comfort			
		1Ø		1Ø		3Ø		1Ø				1Ø		1Ø		3Ø		1Ø			
		16	11	14	11	14	16	5	6	8	10	16	11	14	11	14	16	5	6	8	10
HMI Kit 	UTW-KHMXE	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3
Remote controller 	UTW-C74TXF	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3
	UTW-C74HXF	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3	●*3
Room thermostat 	UTW-C55XA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	UTW-C58XA	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4
Outdoor sensor transmitter 	UTW-MOSXD	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4
RF modules for BSB-Port 	UTW-MRCXD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Web server 	UTW-KW1XD	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5
	UTW-KW4XD	—	●*5	●*5	●*5	●*5	●*5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
LPB clip 	UTW-KL1XD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MODBUS® clip 	UTW-KMBXJ	—	●*6	●*6	●*6	●*6	●*6	—	—	—	—	—	●*6	●*6	●*6	●*6	●*6	—	—	—	—
Service tool (incl. OC1700 Adapter) 	UTW-KSTXD	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7	●*7
Service tool software 	UTW-KPSXD	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8	●*8
External Connect Kit 	UTY-XWZXZ2	—	●	●	●	●	●	—	—	—	—	—	●	●	●	●	●	—	—	—	—
	UTY-XWZXZ3	●	—	—	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	●
Back-up Heater 	UTW-HS6XG	—	●	●	—	—	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—
	UTW-HT9XG	—	—	—	●	●	●	—	—	—	—	—	—	—	●	●	●	—	—	—	—
Electrical backup heater relay 	UTW-KBHL	—	—	—	—	—	—	●	●	●	●	—	—	—	—	—	—	●	●	●	●

*1: The UTW-KREXD (Regulation Extension Kit) is not included but is required for connection.

●: Available —: Not Available

*2: Split DHW integrated type supplies DHW without the DHW Kit and DHW tank.

*3: Includes 21 languages with no need to prepare an RC for Eastern Europe separately.

C74TXF has a built-in room temperature sensor. C74HXF has a built-in room temperature and humidity sensor.

*4: UTW-MRCXD (RF modules) is required for the connection.

*5: The connection of UTW-KW4XD for simultaneous control of multiple ATW units is only possible for cascade systems.

*6: Additional Spare parts 9708302034 (Analogue interface PCB) and 109696 (connection wire) are required.

*7: UTW-KL1XD (LPB clip) is required for the connection.

*8: UTW-KW1XD or UTW-KW4XD (Web server) is required for the connection.

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