

Residential

AIR TO WATER

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WATERSTAGETM
Innovative solutions for Home Heating
SPLIT TYPE/SPLIT DHW INTEGRATED TYPE

AIR TO WATER
Residential



FUJITSU GENERAL LIMITED

WATERSTAGE™ Overview

Solutions that meet a variety of needs

Water heated by WATERSTAGE™ using clean energy is delivered reliably and comfortably throughout the house, including the living room, bedrooms, bathrooms— even a swimming pool.

24 Models

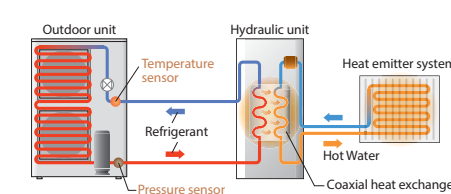
Fujitsu General WATERSTAGE™ heat pumps offer a variety of high-efficiency renewable central heating systems that absorb energy primarily from the air.



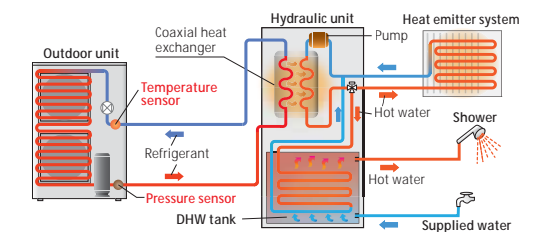
Optimized refrigerant cycle operation

Super High Power and High Power Series deliver high performance and efficiency with twin sensors and hot water heating technology.

Split Type

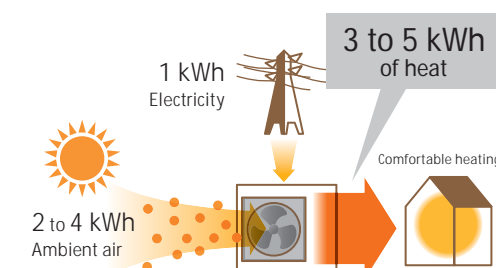


Split DHW Integrated Type



What is a heat pump?

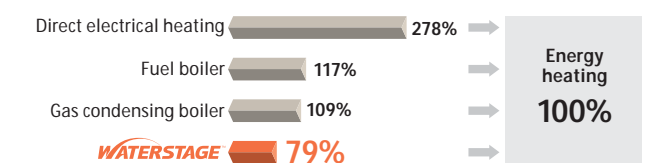
A heat pump extracts heat energy from the atmosphere. It requires only 1 kW of electricity to generate 3 to 5 kW of thermal energy.



Primary energy usage reduced substantially

Proportion of primary energy converted into heating energy is 100%

























Primary Energy Consumption*



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

WATERSTAGE™ Lineup



Type	Split Type				Split DHW Integrated Type									
	Super High Power Series		High Power Series		Super High Power Series		High Power Series		Comfort Series					
Hydraulic unit														
Outdoor unit														
Capacity range	16 kW	15/17 kW	11/14 kW	11/14/16 kW	5/6 kW	8 kW	10 kW	16 kW	15/17 kW	11/14 kW	11/14/16 kW	5/6 kW	8 kW	10 kW
System outline	<ul style="list-style-type: none">• Supplies 60°C hot water even when the outdoor temperature is -20°C.• Supplies 55°C hot water even when the outdoor temperature is -22°C.• Can be used with a variety of heating systems, including underfloor 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.		<ul style="list-style-type: none">• Supplies 60°C hot water even when the outdoor temperature is -20°C.• Can be used with a variety of heating systems, including underfloor heating and radiators.*• Heating and DHW supply in one system.*• Equipped with additional electric heater for backup• 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.		<ul style="list-style-type: none">• Supplies 55°C hot water even when the outdoor temperature is -22°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 underfloor heating and radiators.*		<ul style="list-style-type: none">• Supplies 60°C hot water even when the outdoor temperature is -20°C.• Supplies 55°C hot water even when the outdoor temperature is -22°C.• Can be used with a variety of heating systems, including underfloor heating and radiators.*• Space saving heating and DHW supply in a single Hydraulic unit• Equipped with additional electric heater for backup• Up to two independent control circuits.*• Cooling operation is possible.*• Operating range is -25 to 35°C.		<ul style="list-style-type: none">• Supplies 60°C hot water even when the outdoor temperature is -20°C.• Can be used with a variety of heating systems, including underfloor heating and radiators.*• Space saving heating and DHW supply in a single Hydraulic unit• Equipped with additional electric heater for backup• Up to two independent control circuits.*• Cooling operation is possible.*• Operating range is -25 to 35°C.		<ul style="list-style-type: none">• Supplies 55°C hot water even when the outdoor temperature is -22°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 underfloor heating and radiators.*			
Power source	Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	Single phase, ~230 V, 50 Hz		Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	Single phase, ~230 V, 50 Hz			
Capacity	5 kW				WSYA050ML3 WOYA060KLT 						WGYA050ML3 WOYA060KLT 			
	6 kW				WSYA080ML3 WOYA060KLT 						WGYA080ML3 WOYA060KLT 			
	8 kW				WSYA080ML3 WOYA080KLT 						WGYA080ML3 WOYA080KLT 			
	10 kW				WSYA100ML3 WOYA100KLT 						WGYA100ML3 WOYA100KLT 			
	11 kW		WSYG140DG6 WOYG112LHT	WSYK160DG9 WOYK112LCTA 					WGYG140DG6 WOYG112LHT	WGYK160DG9 WOYK112LCTA 				
	14 kW		WSYG140DG6 WOYG140LCTA	WSYK160DG9 WOYK140LCTA 					WGYG140DG6 WOYG140LCTA	WGYK160DG9 WOYK140LCTA 				
	15 kW		WSYK170DJ9 WOYK150LJL					WGYK170DJ9 WOYK150LJL						
	16 kW	WSYG160DJ6 WOYG160LJL		WSYK160DG9 WOYK160LCTA 			WGYG160DJ6 WOYG160LJL			WGYK160DG9 WOYK160LCTA 				
17 kW		WSYK170DJ9 WOYK170LJL					WGYK170DJ9 WOYK170LJL							

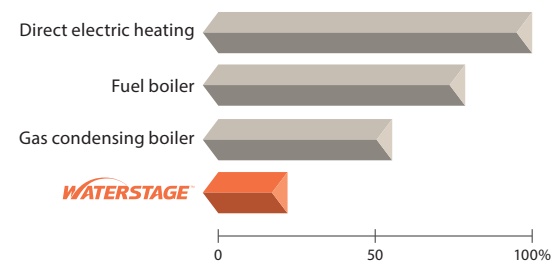
* Please refer to page W-036, W-037 for more optional parts information.

Benefits

Less CO₂ Emissions

WATERSTAGE™ is an environmentally friendly system that emits substantially less carbon dioxide than conventional gas and hydrocarbon combustion systems.

Average annual CO₂ emissions



*Calculations based on energy efficiency data provided by the European Programme for Energy Efficiency in EU-27: 89% for fuel boilers; 93% for gas boiler

Clean and Healthy

As a WATERSTAGE™ system does not use a burner to heat water, it does not produce NO_x or other harmful substances.

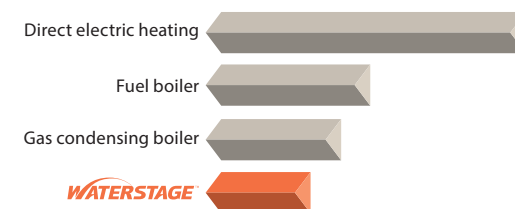
Environmentally friendly heating system



Low Running Cost

High-efficiency heat pump technology keeps the running cost of a WATERSTAGE™ system.

Average annual running cost



*The running cost may vary depending on a system's installation, geographical location, and operating conditions.

Easy Installation and Maintenance

All components are built into a compact outdoor unit or a Hydraulic unit.

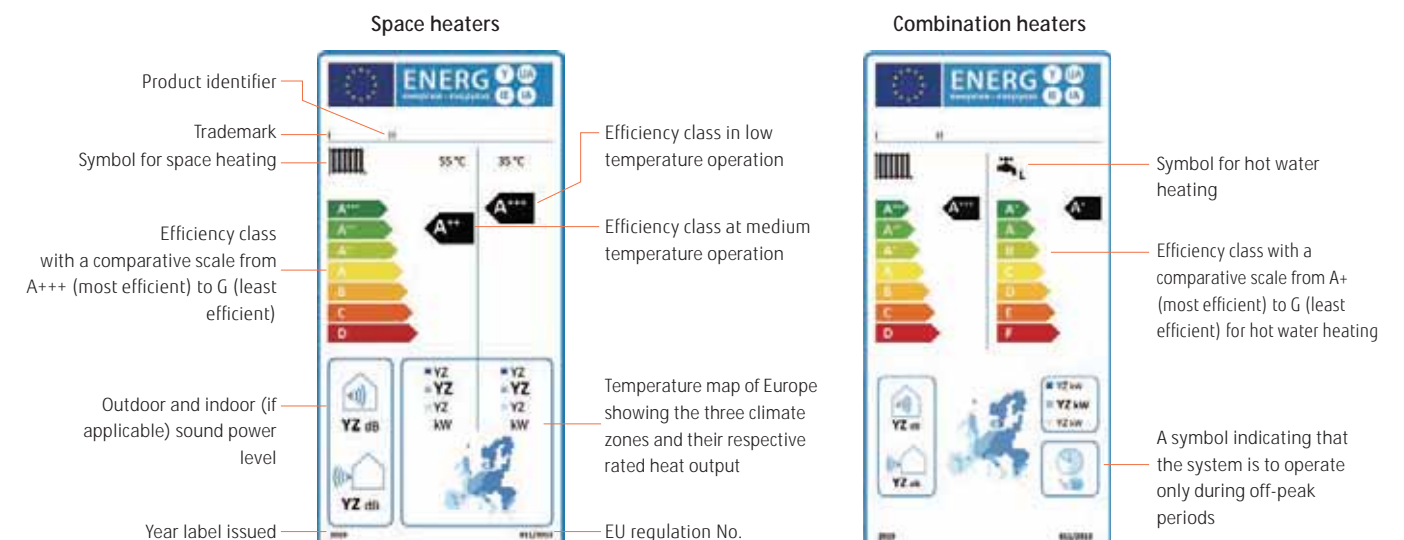


Well-designed Hydraulic unit

The sophisticated arrangement of Hydraulic units makes piping and maintenance work easy.

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 D. 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+++	η _s ≥ 150	η _s ≥ 175
A++	125 ≤ η _s < 150	150 ≤ η _s < 175
A+	98 ≤ η _s < 125	123 ≤ η _s < 150
A	90 ≤ η _s < 98	115 ≤ η _s < 123
B	82 ≤ η _s < 90	107 ≤ η _s < 115
C	75 ≤ η _s < 82	100 ≤ η _s < 107
D	36 ≤ η _s < 75	61 ≤ η _s < 100
E	34 ≤ η _s < 36	59 ≤ η _s < 61
F	30 ≤ η _s < 34	55 ≤ η _s < 59
G	η _s < 30	η _s < 55

EHPA Quality Label



Fujitsu General's WATERSTAGE™² 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 BWV⁴, 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 new heat pump series are SG ready compatible.

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

The CEN Heat Pump KEYMARK



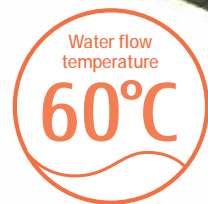
The Heat Pump KEYMARK is a full certificate supporting the quality of heat pumps in the European market. The Heat Pump KEYMARK is a voluntary, independent, European certification mark (ISO Type 5 Certification) for all heat pumps, combination heat pumps, and hot water heaters (as covered by Ecodesign, EU Regulation 813/2013 and 814/2013). Fujitsu General's WATERSTAGE™⁵ has acquired the KEYMARK certificate⁶.

*5: R32 refrigerant comfort model only

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

Home Heating & Domestic Hot Water Supply

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.



Super High Power Series
Single phase: 16 kW
3-phase: 15/17 kW

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.

Floor heating and domestic hot water supply

Outdoor units and hydraulic indoor units can be installed flexibly and easily. Hydraulic units installed inside the house prevent the circulating water from freezing. More units can be cascaded together to provide a greater heating capacity with greater flexibility.*

*1: High Power Series only



Adopting R32 refrigerant

R32 refrigerant is an environmentally friendly refrigerant with a significantly lower Global Warming Potential (GWP) than conventional refrigerants.



300 Liters



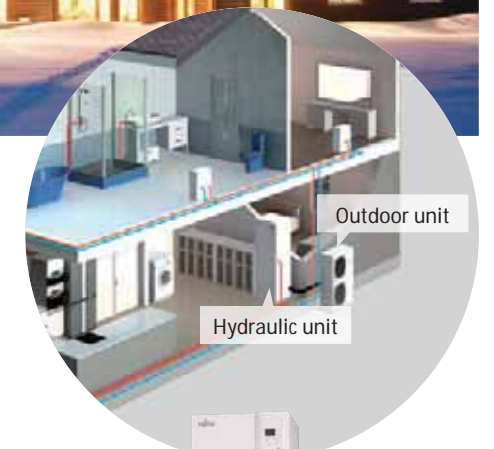
+ DHW tank

A DHW tank (optional) can be connected to supply hot water.

+ Boiler

By combining with an existing boiler, powerful heating can be achieved even at low outdoor temperature.

* Please refer to page W-036, W-037 for more optional parts information.

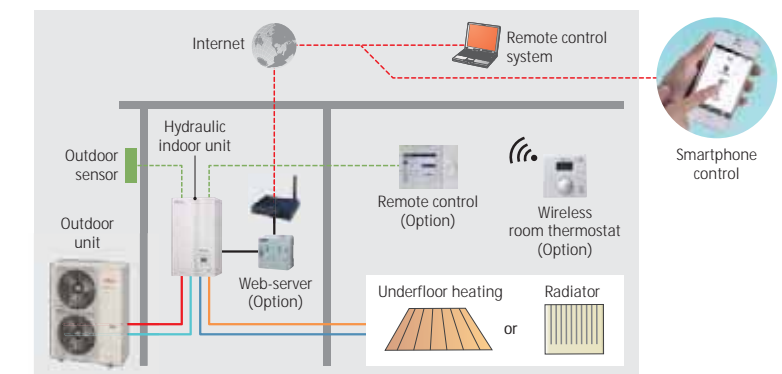


Stylish space saving solution with built-in DHW tank



Built-in DHW tank saves a great deal of space.

Existing boilers can be replaced easily. A higher heating capacity can be achieved with the flexibility to cascade more units.



Smart control

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

High-Efficiency Technology

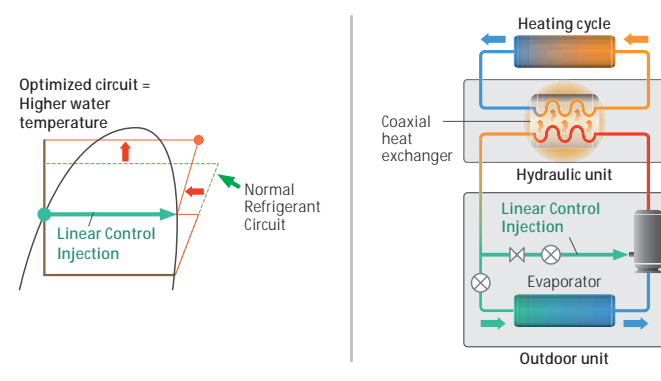
Twin-Rotary Compressor



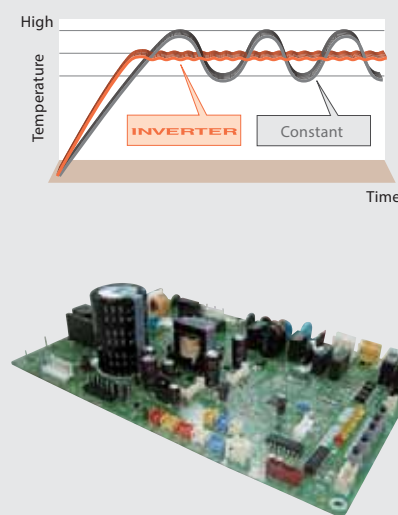
For Outdoor unit

Twin-Rotary Compressor with Linear Control Injection Port

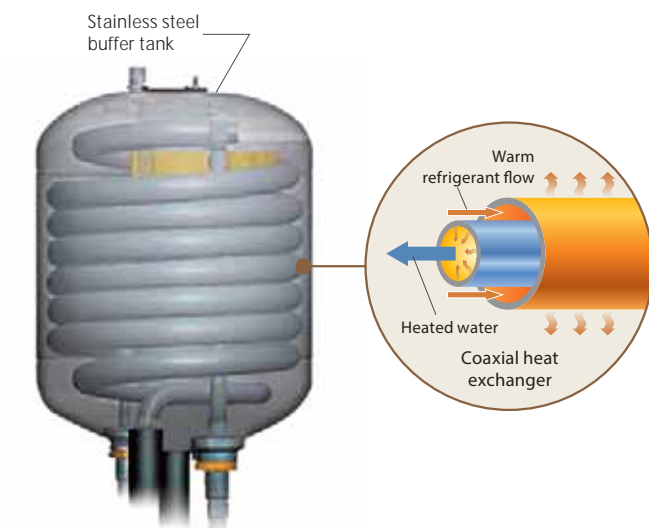
The compressor achieves a high condensing temperature without overheating the discharge gas temperature due to the Linear control injection process used during compression. This makes the condensing temperature higher than in a normal circuit. Higher water temperatures can be achieved by controlling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



DC inverter technology controls temperatures precisely.



High-durability coaxial heat exchanger



For Hydraulic unit

Stainless steel buffer tank

Heat exchange amount is 25% higher than the previous model. Energy-saving performance has also been improved.

- Anti-corrosion protection
- No flow switch required
- Anti-freeze protection not required

Class A Pump

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



Split Type

Comfort Series

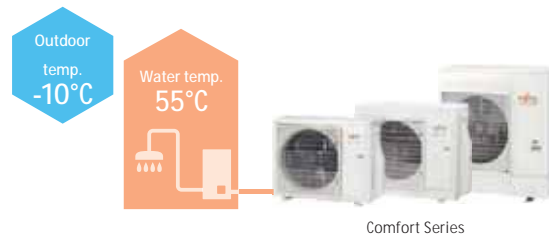


WATERSTAGE™

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.



High COP

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

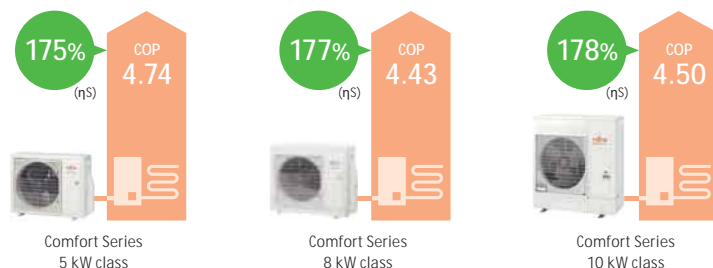
Energy efficiency class



*Temperature application: Heating temp. 35°C

Seasonal space heating energy efficiency (η_s)

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



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.

Hydraulic unit:
WSYA050ML3/WSYA080ML3/
WSYA100ML3
Outdoor unit:
WOYA060KLT/WOYA080KLT/
WOYA100KLT



Specifications

Model Name	Hydraulic unit	WSYA050ML3	WSYA080ML3	WSYA080ML3	WSYA100ML3
	Outdoor unit	WOYA060KLT	WOYA060KLT	WOYA080KLT	WOYA100KLT
Capacity Range		5	6	8	10
7°C/35°C floor heating *1	Heating capacity	4.50	5.50	7.50	9.50
	Input power	0.949	1.18	1.69	2.11
	COP	4.74	4.65	4.43	4.50
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	4.40	5.00	5.70	8.90
	Input power	1.59	1.90	2.13	3.36
	COP	2.76	2.63	2.68	2.65

Space heating characteristics*2		°C	55	35	55	35	55	35	55	35
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	Hydraulic unit		40	-	40	-	40	-	40	-
	Outdoor unit	dB(A)	57	-	57	-	60	-	62	-

Hydraulic unit specifications			Single phase, ~230 V, 50 Hz				
Power source			847 × 450 × 493	847 × 450 × 493	847 × 450 × 493	847 × 450 × 493	
Dimensions H × W × D		mm	47	47	47	47	
Weight (Net)		kg	7.6/22.0	8.5/22.0	10.0/22.0	13.2/30.0	
Water circulation		L/min	16	16	16	16	
Buffer tank capacity		L	8	8	8	8	
Expansion vessel capacity		L	55	55	55	55	
Water flow temperature range		°C	Ø25.4/Ø25.4	Ø25.4/Ø25.4	Ø25.4/Ø25.4	Ø25.4/Ø25.4	
Water pipe connection diameter		mm	3.0	3.0	3.0	3.0	
Backup heater		kW					

Outdoor unit specifications			Single phase, ~230 V, 50 Hz				
Power source			13.0	13.0	18.0	19.0	
Current		A	632 × 799 × 290	632 × 799 × 290	716 × 820 × 315	998 × 940 × 320	
Dimensions H × W × D		mm	39	39	42	62	
Weight (Net)		kg	R32 (675)	R32 (675)	R32 (675)	R32 (675)	
Refrigerant		Type (Global Warming Potential)	0.97	0.97	1.02	1.63	
Refrigerant charge		kg	25	25	25	20	
Additional refrigerant charge		g/m	6.35	6.35	6.35	9.52	
Connection pipe	Diameter	mm	12.70	12.70	12.70	15.88	
	Length	m	3/30	3/30	3/30	3/30	
	Length (Pre-charge)	m	15	15	15	20	
	Height difference	m	20	20	20	20	
Operating range		°C	-20 to 35	-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.

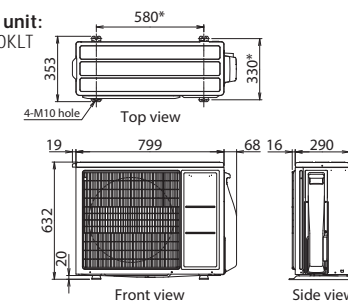
*2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

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

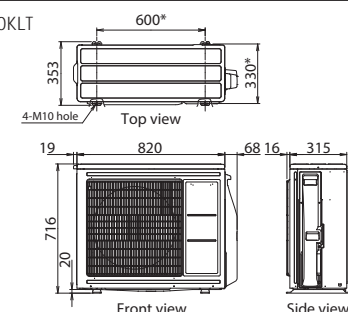
Dimensions

(Unit: mm)

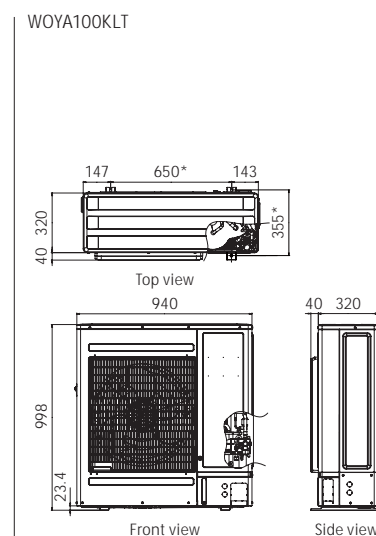
Outdoor unit:
WOYA060KLT



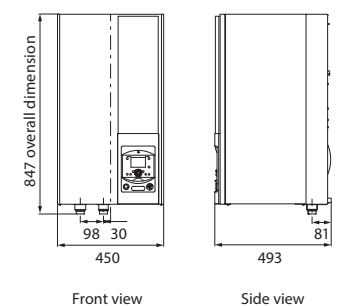
WOYA080KLT



WOYA100KLT



Hydraulic unit:
WSYA050ML3/WSYA080ML3/WSYA100ML3



*Pitch of bolts for installation

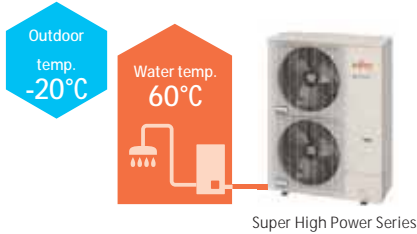
Split Type
Super High Power Series



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.



High COP

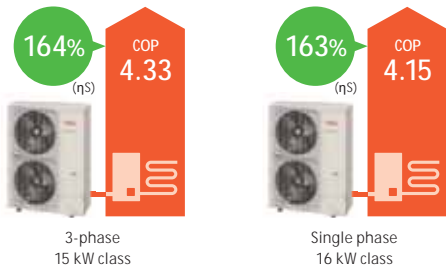
Heat pumps of WATERSTAGE™ ATW Systems work more efficiently and consume less energy than conventional heating systems.

Energy efficiency
class



Seasonal space heating energy efficiency (η_s)

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



Operating range extended to -25°C

Operating range improved down to -25°C outdoor temperature



Hydraulic unit:
WSYG160DJ6/[3-phase] WSYK170DJ9
Outdoor unit:
WOYG160LJL
[3-phase] WOYK150LJL/WOYK170LJL



Hydraulic unit
Single phase/
3-phase



Outdoor unit
Single phase 16 kW
3-phase 15/17 kW

Specifications

Model Name			Hydraulic unit		WSYG160DJ6		WSYK170DJ9		WSYK170DJ9		
Capacity range			Outdoor unit		WOYG160LJL		WOYK150LJL		WOYK170LJL		
7°C/35°C floor heating *1	Heating capacity		kW	16		15		17			
	Input power			16.00		15.00		17.00			
	COP			3.86		3.46		4.10			
2°C/35°C floor heating *1	Heating capacity		kW	4.15		4.33		4.15			
	Input power			13.30		13.20		13.50			
	COP			4.25		4.06		4.27			
-7°C/35°C floor heating*1	Heating capacity		kW	3.13		3.25		3.16			
	Input power			14.50		13.20		15.00			
	COP			5.27		4.55		5.32			
					2.75		2.90		2.82		
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	14	16	16	17	17	18		
Seasonal space heating energy efficiency (η _s)			%	125	163	130	164	130	161		
Annual energy consumption			kWh	8,757	8,014	9,915	8,606	10,232	9,059		
Sound power level	Hydraulic unit		dB(A)	45	45	45	45	45	45		
	Outdoor unit			67	66	67	66	67	68		
Hydraulic unit specifications											
Power source				Single phase, ~230 V, 50 Hz			3-phase, ~400 V, 50 Hz				
Dimensions H × W × D			mm	805 × 450 × 471			805 × 450 × 471				
Weight (Net)			kg	52.5			52.5				
Water circulation			Min./Max.	L/min	26.4/57.8			24.0/54.2			
Buffer tank capacity			L	22			22				
Expansion vessel capacity			L	10			10				
Water flow temperature range			Max.	°C	60			60			
Water pipe connection diameter			Flow/Return	mm	Ø25.4/Ø25.4			Ø25.4/Ø25.4			
Backup heater			Capacity	kW	6.0 (3.0 kW × 2 pcs.)			9.0 (3.0 kW × 3 pcs.)			
Outdoor unit specifications											
Power source				Single phase, ~230 V, 50 Hz			3-phase, ~400 V, 50 Hz				
Current			Max.	A	28.0			14.0		14.0	
Dimensions H × W × D			mm	1,428 × 1,080 × 480			1,428 × 1,080 × 480		1,428 × 1,080 × 480		
Weight (Net)			kg	137			138		138		
Refrigerant			Type (Global Warming Potential)	R410A (2,088)							
			Charge	kg	3.80			3.80		3.80	
Additional refrigerant charge				g/m	50			50		50	
Connection pipe	Diameter	Liquid	mm	Ø9.52			Ø9.52		Ø9.52		
		Gas	Ø15.88			Ø15.88		Ø15.88			
	Length	Min./Max.	m	5/30			5/30		5/30		
		Length (Pre-charge)	m	15			15		15		
Height difference	Max.	m	25/15 (Outdoor unit: Upper/Lower)								
		Heating	°C	-25 to 35			-25 to 35		-25 to 35		

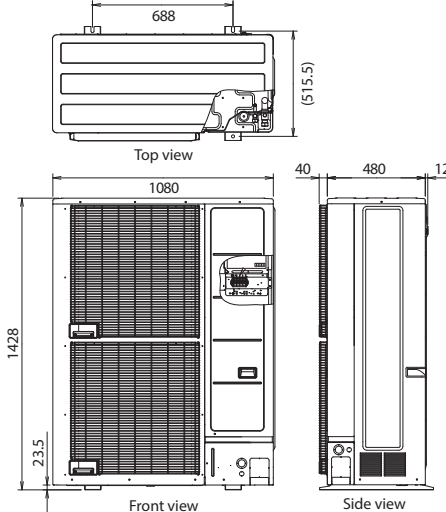
*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance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

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

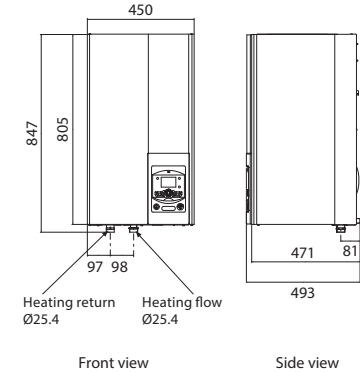
Dimensions

(Unit: mm)

Outdoor unit:
Single phase: WOYG160LJL
3-phase: WOYK150LJL/WOYK170LJL



Hydraulic unit:
Single phase: WSYG160DJ6
3-phase: WSYK170DJ9



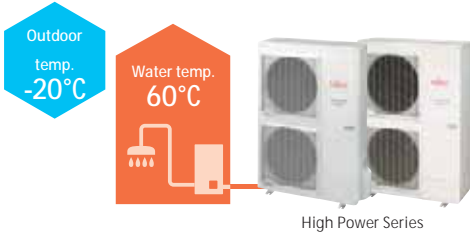
Split Type
High Power Series



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.

* 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.



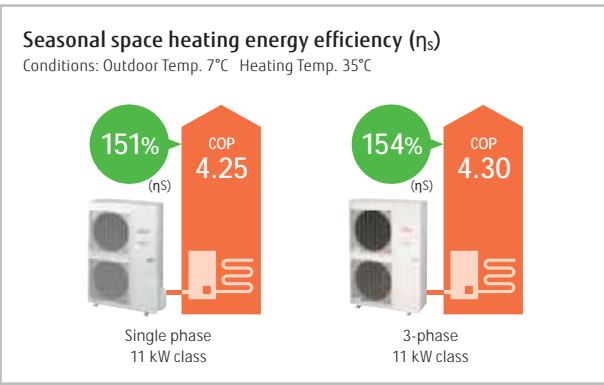
High COP

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

Energy efficiency class



*Temperature application: Heating temp. 35°C



Hydraulic unit:
WSYG140DG6/[3-phase] WSYK160DG9
Outdoor unit:
WOYG112LHT/WOYG140LCTA
[3-phase] WOYK112LCTA/WOYK140LCTA/
WOYK160LCTA



Specifications

Model Name		Hydrylic unit		WSYG140DG6		WSYG140DG6		WSYK160DG9		WSYK160DG9		WSYK160DG9			
Capacity range		Outdoor unit		WOYG112LHT		WOYG140LCTA		WOYK112LCTA		WOYK140LCTA		WOYK160LCTA			
				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				
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	Hydraulic unit	dB(A)	46		46		46		46		46		46		
	Outdoor unit		68		69		69		68		70		68		
Hydraulic 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		42						42				
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		
Backup heater			Capacity		kW		6.0 (3.0 kW × 2 pcs.)						9.0 (3.0 kW × 3 pcs.)		
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		800 × 450 × 457						1,290 × 900 × 330			10.5	
Weight (Net)			kg		92						99				
Refrigerant			Type (Global Warming Potential)		R410A (2.088)										
Additional refrigerant charge			Charge		kg		2.50								
					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										
Operating range	Height difference	Max.	m		15										
		Heating	°C		-25 to 35										

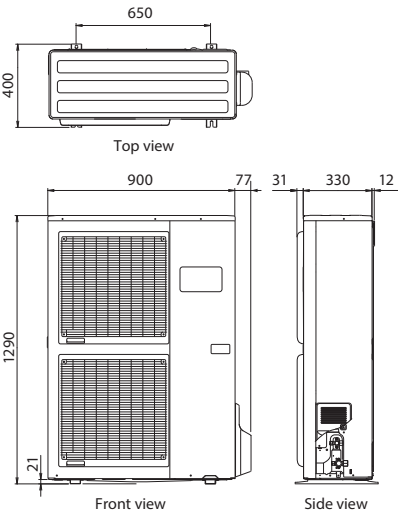
*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance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

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

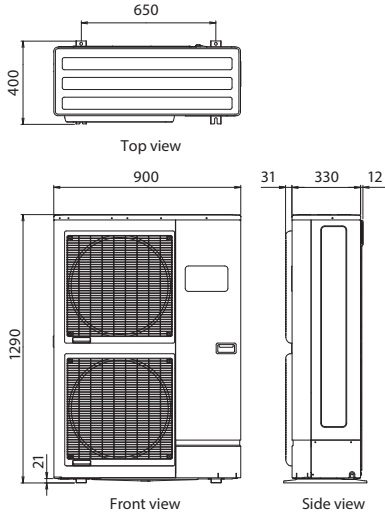
Dimensions

(Unit: mm)

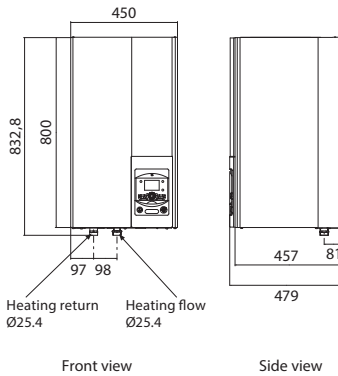
Outdoor unit:
Single phase: WOYG112LHT/WOYG140LCTA



3-phase: WOYK112LCTA/WOYK140LCTA/WOYK160LCTA



Hydraulic unit:
Single phase: WSYG140DG6
3-phase: WSYK160DG9



Split DHW Integrated Type

Comfort Series



Hydraulic unit:
WGYA050ML3/WGYA080ML3/
WGYA100ML3
Outdoor unit:
WOYA060KLT/WOYA080KLT/
WOYA100KLT



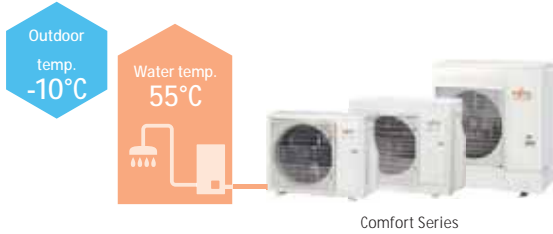
Specifications

Model Name	Hydraulic unit		WGYA050ML3 WOYA060KLT		WGYA080ML3 WOYA080KLT		WGYA100ML3 WOYA100KLT			
Capacity range			5		6		8		10	
7°C/35°C floor heating *1	Heating capacity	kW	4.50		5.50		7.50		9.50	
	Input power		0.949		1.18		1.69		2.11	
	COP		4.74		4.65		4.43		4.50	
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	kW	4.40		5.00		5.70		8.90	
	Input power		1.59		1.90		2.13		3.36	
	COP		2.76		2.63		2.68		2.65	
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	Hydraulic unit	dB(A)	40	-	40	-	40	-	40	-
	Outdoor unit		57	-	57	-	60	-	62	-
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	
Hydraulic 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		13.2/30.0	
DHW capacity		L	190		190		190		190	
Hot water heater capacity		kW	1.5		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		55	
Water pipe connection diameter		Flow/Return mm	Ø25.4/Ø25.4		Ø25.4/Ø25.4		Ø25.4/Ø25.4		Ø25.4/Ø25.4	
Hot water pipe connection diameter		mm	Ø19.05		Ø19.05		Ø19.05		Ø19.05	
Backup heater		Capacity kW	3.0		3.0		3.0		3.0	
Outdoor unit specifications										
Power source			Single phase, ~230 V, 50 Hz							
Current		Max. A	13.0		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		25		20	
Connection pipe	Liquid	Diameter mm	6.35		6.35		6.35		9.52	
	Gas	mm	12.70		12.70		12.70		15.88	
	Length	Min./Max. m	3/30		3/30		3/30		3/30	
	Length (Pre-charge)	m	15		15		15		20	
Height difference	Max.	m	20		20		20		20	
	Heating	°C	-20 to 35		-20 to 35		-20 to 35		-20 to 35	

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.



High COP

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

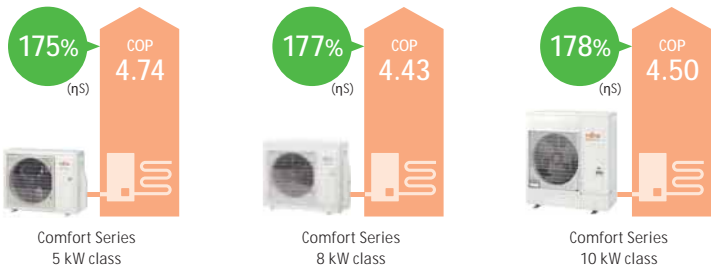
Energy efficiency class



*Temperature application: Heating temp. 35°C

Seasonal space heating energy efficiency (η_s)

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



Outdoor unit technology

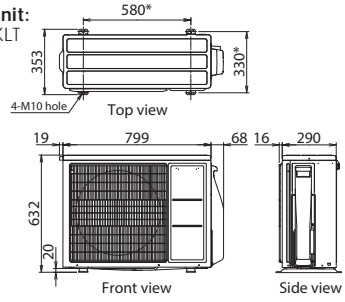


- DC Fan Motor**
High-performance, high-efficiency small DC fan motor mounted
- DC Twin-Rotary Compressor**
High-efficiency DC twin-rotary compressor
- DC Inverter**
DC inverter provides smooth water temperature control.

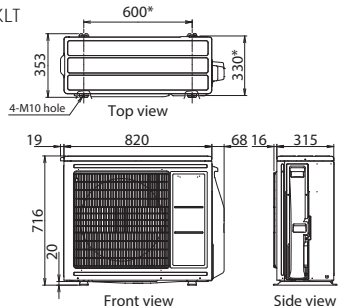
Dimensions

(Unit: mm)

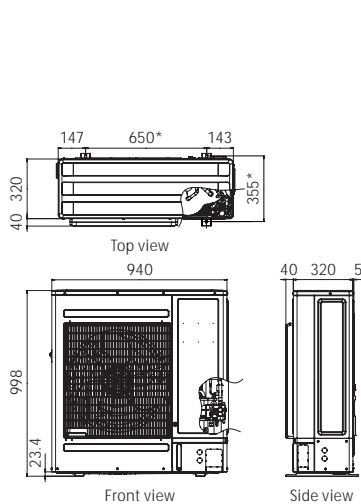
Outdoor unit:
WOYA060KLT



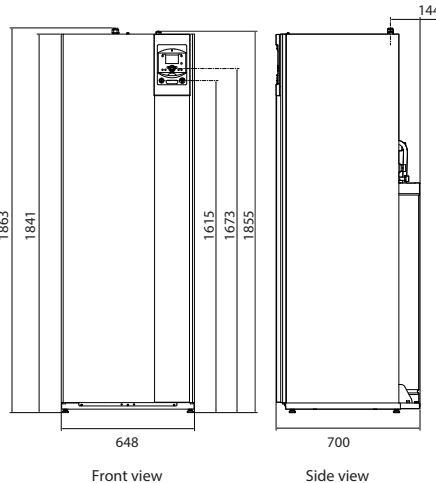
WOYA080KLT



WOYA100KLT



Hydraulic unit:
WGYA050ML3/WGYA080ML3/WGYA100ML3



*Pitch of bolts for installation

Split DHW
Integrated Type

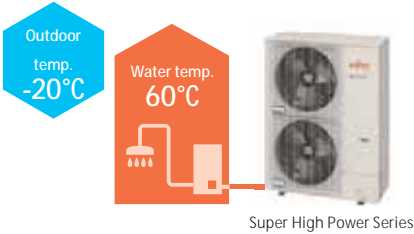
Super High Power Series



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.



High COP

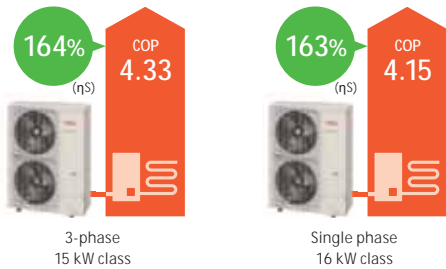
Heat pumps of WATERSTAGE™ ATW Systems work more efficiently and consume less energy than conventional heating systems.

Energy efficiency
class



Seasonal space heating energy efficiency (ηs)

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



Operating range extended to -25°C

Operating range improved down to -25°C outdoor temperature



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

Hydraulic unit:
WGYG160DJ6 / [3-phase] WGYK170DJ9
Outdoor unit:
WOYG160LJL
[3-phase] WOYK150LJL/WOYK170LJL



Hydraulic unit
Single phase/
3-phase



Outdoor unit
Single phase 16 kW
3-phase 15/17 kW

Specifications

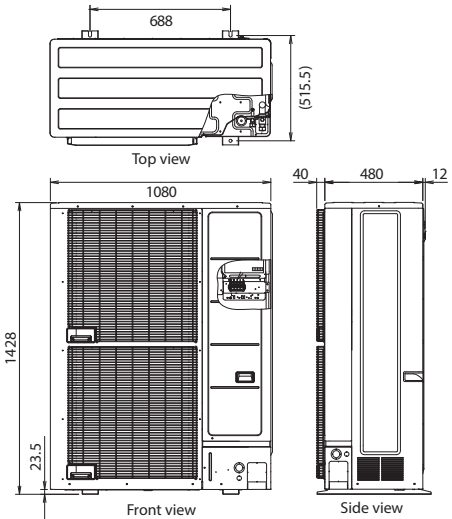
Model Name		Hydualic unit	WGYG160DJ6		WGYK170DJ9		WGYK170DJ9	
Capacity range		Outdoor unit	WOYG160LJL		WOYK150LJL		WOYK170LJL	
			16		15		17	
7°C/35°C floor heating *1	Heating capacity	kW	16.00		15.00		17.00	
	Input power		3.86		3.46		4.10	
	COP		4.15		4.33		4.15	
2°C/35°C floor heating *1	Heating capacity	kW	13.30		13.20		13.50	
	Input power		4.25		4.06		4.27	
	COP		3.13		3.25		3.16	
-7°C/35°C floor heating*1	Heating capacity	kW	14.50		13.20		15.00	
	Input power		5.27		4.55		5.32	
	COP		2.75		2.90		2.82	
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	14	16	16	17	17	18
Seasonal space heating energy efficiency (η _s)		%	125	163	130	164	130	161
Annual energy consumption		kWh	8,757	8,014	9,915	8,606	10,232	9,059
Sound power level	Hydraulic unit	dB(A)	45	45	45	45	45	45
	Outdoor unit		67	66	67	66	67	68
Domestic hot water characteristics*2								
Load profile			L					
Energy efficiency class			A					
Energy efficiency (η _{wh})		%	109					
Annual electricity consumption		kWh	941					
Hydraulic unit specifications								
Power source			Single phase, ~230 V, 50 Hz		3-phase, ~400 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		24.0/54.2	
DHW capacity			L		190		27.3/61.4	
Hot water heater capacity		kW	1.5					
Buffer tank capacity		L	22					
Expansion vessel capacity		L	12					
Water flow temperature range		Max.	°C					
Water pipe connection diameter		Flow/Return	mm		Ø25.4/Ø25.4			
Hot water pipe connection diameter			mm		Ø19.05			
Backup heater		Capacity	kW		6.0 (3.0 kW × 2 pcs.)		9.0 (3.0 kW × 3 pcs.)	
Outdoor unit specifications								
Power source			Single phase, ~230 V, 50 Hz		3-phase, ~400 V, 50 Hz			
Current		Max.	A		28.0		14.0	
Dimensions H × W × D			mm		1,428 × 1,080 × 480		1,428 × 1,080 × 480	
Weight (Net)			kg		137		138	
Refrigerant		Type (Global Warming Potential)	R410A (2,088)		R410A (2,088)			
Additional refrigerant charge		Charge	kg		3.80		3.80	
			g/m		50		50	
Connection pipe	Diameter	Liquid	mm		Ø9.52		Ø9.52	
		Gas	mm		Ø15.88		Ø15.88	
	Length	Min./Max.	m		5/30		5/30	
		Length (Pre-charge)	m		15		15	
Height difference		Max.	m		25/15 (Outdoor unit: Upper/Lower)		25/15 (Outdoor unit: Upper/Lower)	
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/

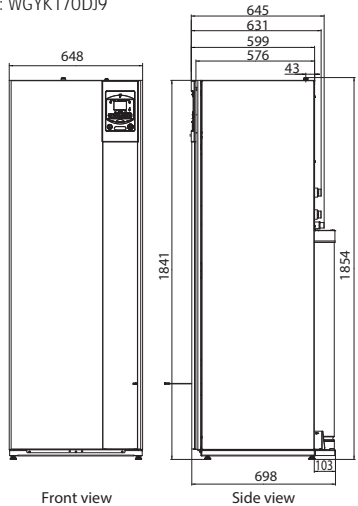
Dimensions

(Unit: mm)

Outdoor unit:
Single phase: WOYG160LJL
3-phase: WOYK150LJL/WOYK170LJL



Hydraulic unit:
Single phase: WGYG160DJ6
3-phase: WGYK170DJ9



Split DHW
Integrated Type

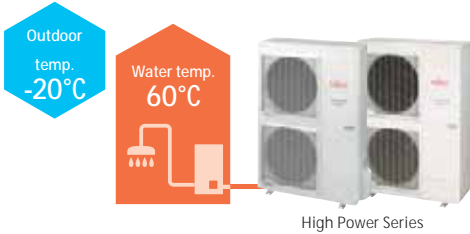
High Power Series



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.

* 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.



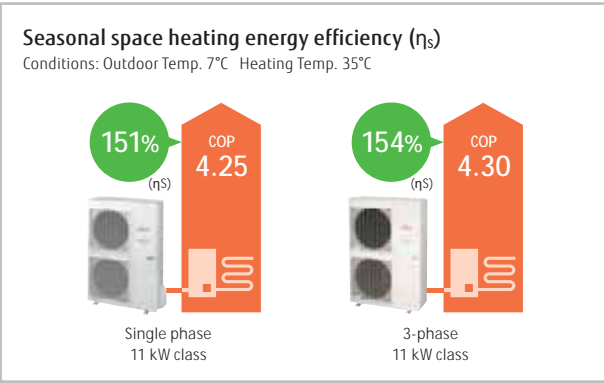
High COP

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

Energy efficiency
class

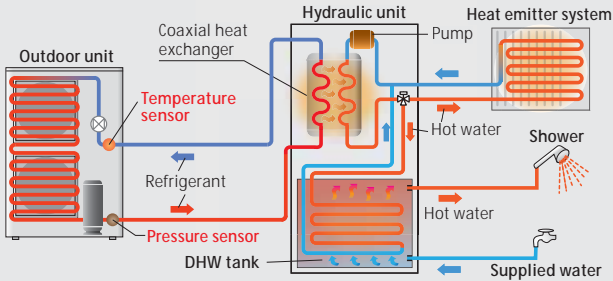


*Temperature application: Heating temp. 35°C



Optimized refrigerant cycle operation

The High Power Series deliver high performance and efficiency with twin sensors and hot water heating technology.



Hydraulic unit:
WGYG140DG6/[3-phase] WGYK160DG9
Outdoor unit:
WOYG112LHT/WOYG140LCTA
[3-phase] WOYK112LCTA/WOYK140LCTA/
WOYK160LCTA



Hydraulic unit
Single phase/
3-phase



Outdoor unit
Single phase
11/14 kW



Outdoor unit
3-phase
11/14/16 kW

Specifications

Model Name		Hyd. unit		WGYG140DG6		WGYG140DG6		WGYK160DG9		WGYK160DG9		WGYK160DG9		
		Outdoor unit		WOYG112LHT		WOYG140LCTA		WOYK112LCTA		WOYK140LCTA		WOYK160LCTA		
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			
Space heating characteristics*2														
Temperature application		°C		55		35		55		35		55		
Energy efficiency class				A+		A++		A+		A++		A+		
Rated heat output (P _{rated})		kW		9		11		9		11		13		
Seasonal space heating energy efficiency (η _s)		%		112		151		113		148		117		
Annual energy consumption		kWh		6,704		6,062		8,041		6,824		6,669		
Sound power level	Hydraulic unit	dB(A)	46		46		46		46		46			
	Outdoor unit		68		69		69		68		70			
Domestic hot water characteristics*2														
Load profile								L						
Energy efficiency class								A						
Energy efficiency(η _{wh})		%						88						
Annual electricity consumption		kWh						1166						
Hydraulic 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								152				
Water circulation		Min./Max.		L/min		19.5/39.0		24.4/28.7		19.5/39.0		24.4/48.7		
DHW capacity				L						190				
Hot water heater capacity		kW								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				
Backup heater		Capacity		kW		6.0 (3.0 kW × 2 pcs.)				9.0 (3.0 kW × 3 pcs.)				
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				
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									Ø9.52			
		Gas									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:

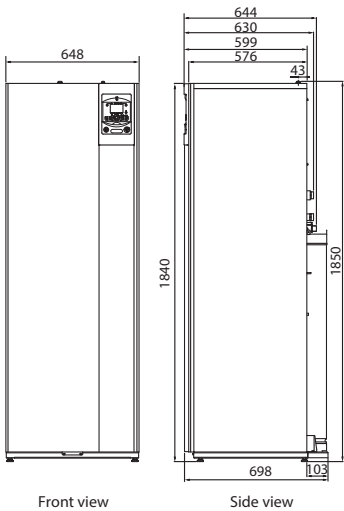
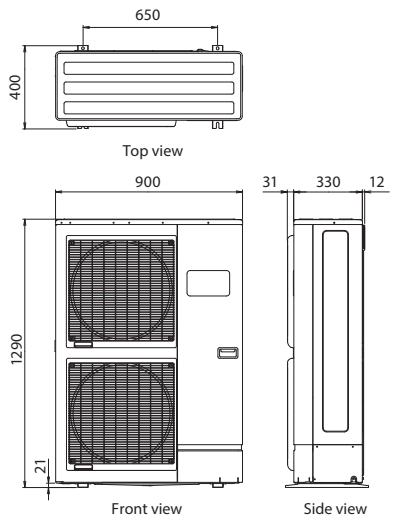
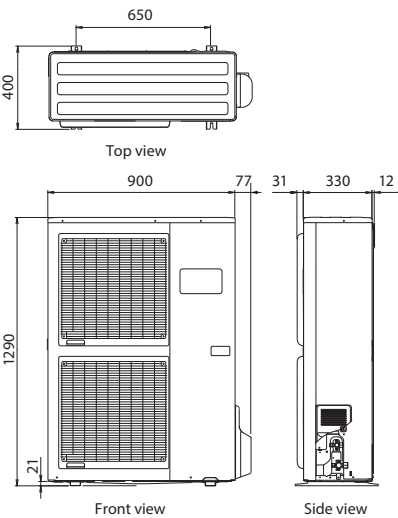
Single phase: WOYG112LHT/WOYG140LCTA

3-phase: WOYK112LCTA/WOYK140LCTA/WOYK160LCTA

Hydraulic unit:

Single phase: WGYG140DG6

3-phase: WGYK160DG9

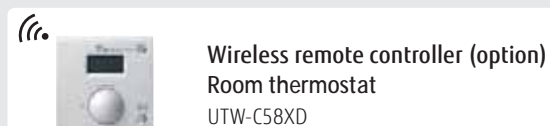


Control Overview

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 remote controller (option)
Room thermostat
UTW-C58XD



Wireless remote controller (option)
Room thermostat
UTW-C55XA



Wireless remote controller (option)
Remote controller
UTW-C74TXF*1
UTW-C74HXF*1



RF module
UTW-MRCXD



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.

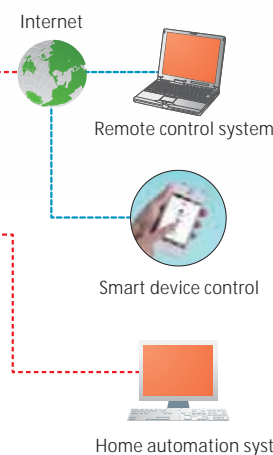
Adapters for external devices



Web server (option)
UTW-KW1XD
UTW-KW4XD



MODBUS® clip (option)
UTW-KMBXJ*2



* Please refer to page W-036, W-037 for more optional parts information.

Hydraulic 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 setting

- Select from heating menu
- Setting Time program



HMI kit (option)
UTW-KHMXE
Supports
multiple languages



Super High Power Series
Hydraulic unit



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.

Hydraulic unit Controller 4 Heating modes

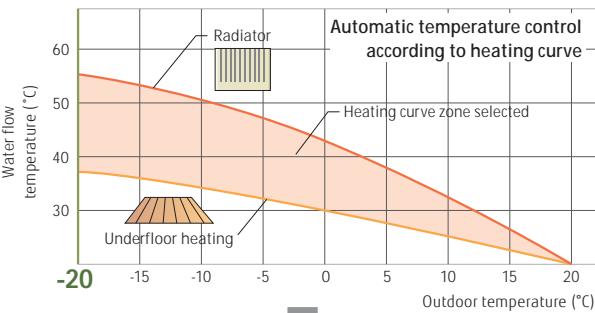
- 1. Automatic mode**
Enables automatic switching between Comfort mode and Reduce mode according to time program
- 2. Reduce mode**
Maintains water temperature at a lower level
- 3. Comfort mode**
Maintains water temperature at a comfortable level
- 4. Protection mode**
Activates frost protection in standby operation



Useful Features

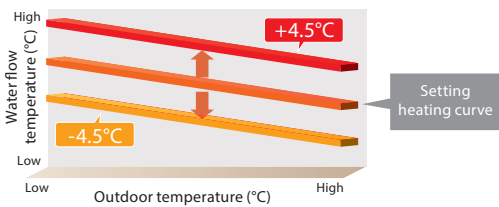
Automatic heating curve control

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.

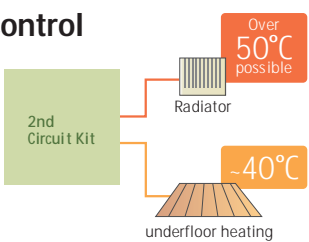
Auto changeover

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

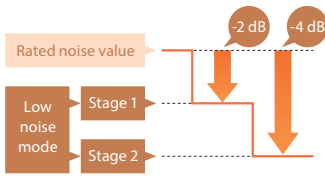
*1: Optional parts required



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.

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-036, W-037 for more optional parts information.

Safety Features

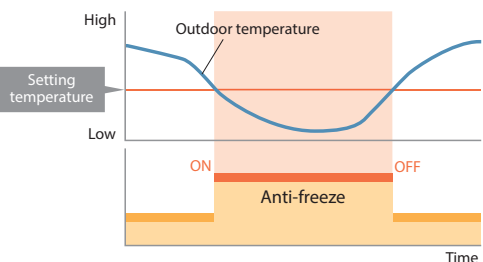
Anti-Legionella function

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



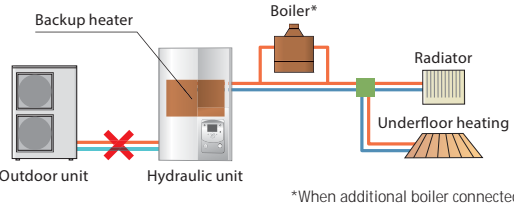
Anti-freeze function

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.

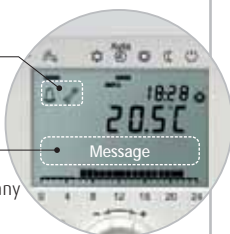


Error and Maintenance Alarm

Enables quick error-handling services and maintenance

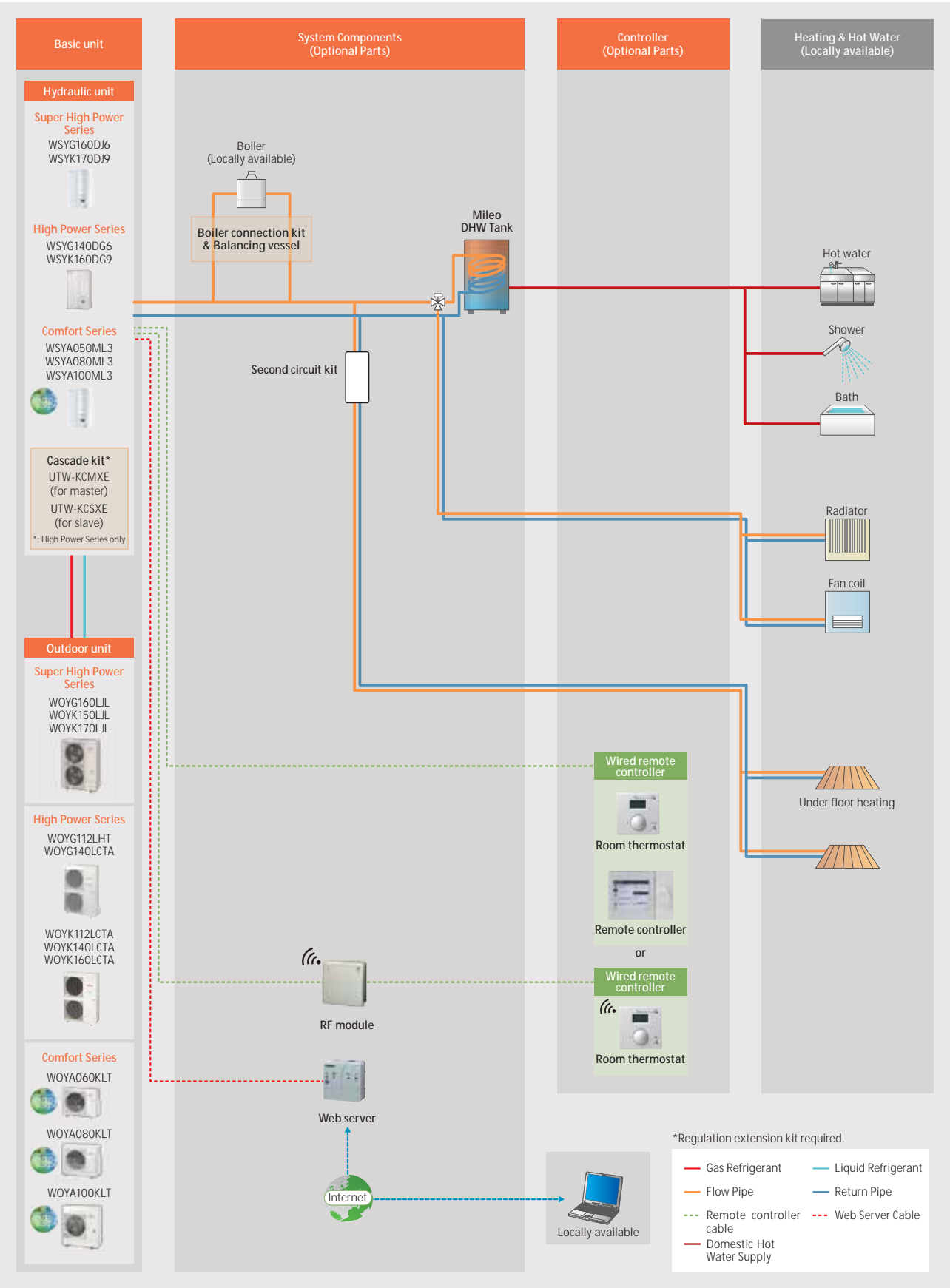


- Error history saves 10 errors in memory
- Display telephone number of service company

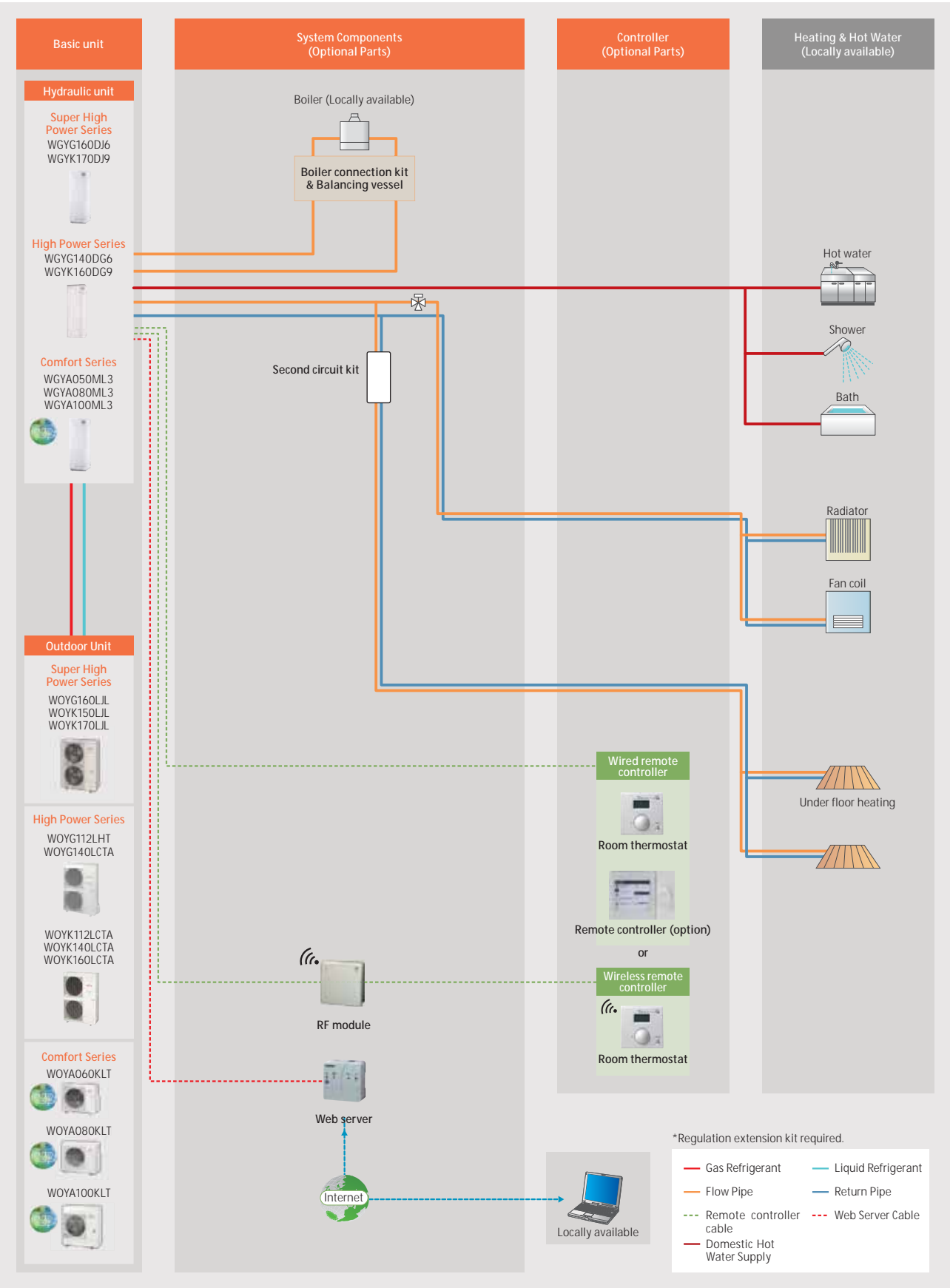


System Configuration

Split Type



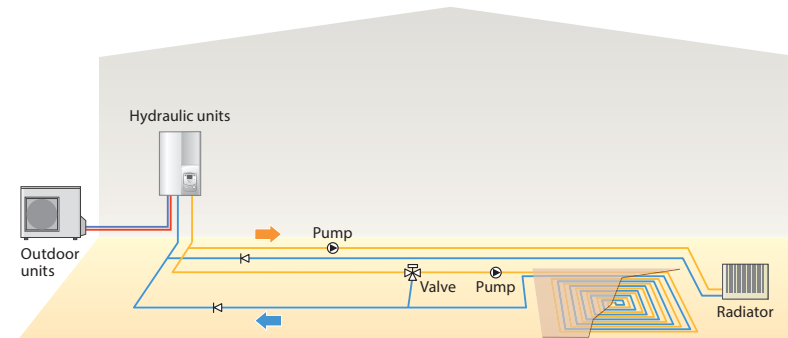
Split DHW Integrated Type



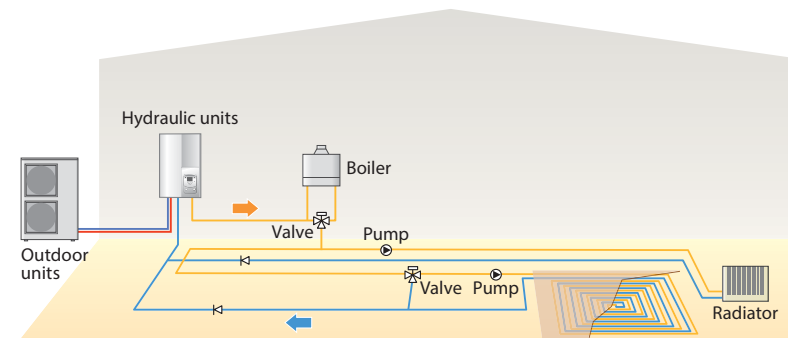
Case Studies

Split Type

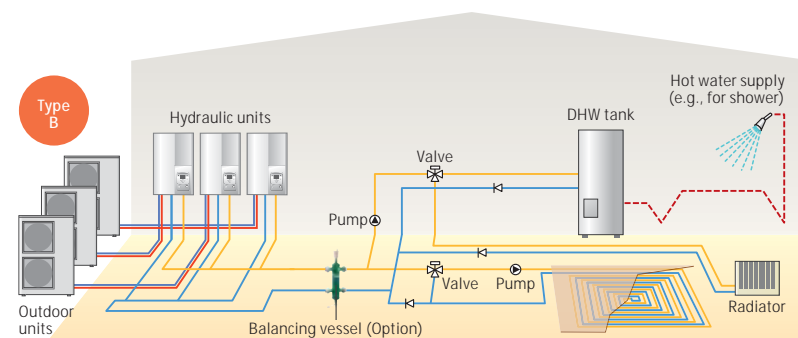
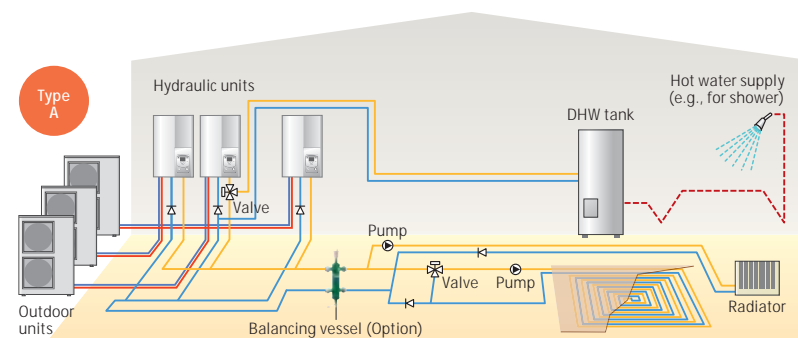
**2-emitter simultaneous heating
(Individual control)**
Underfloor heating + Radiator



**Boiler connected to heating
(Boiler + Heating)**



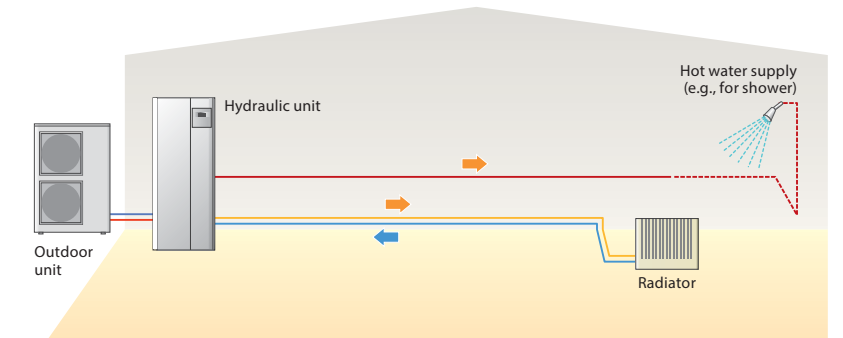
**2-emitter simultaneous heating &
domestic hot water supply (Cascade)**



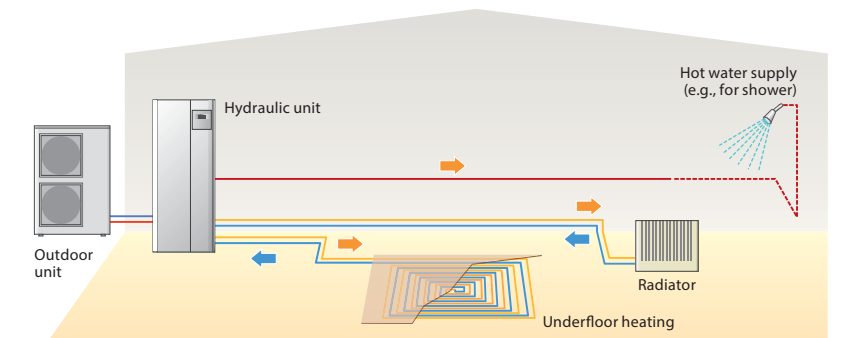
*The hydraulic layouts shown are mainly representation. Please check with local dealer for actual hydraulic connections.

Split DHW Integrated Type

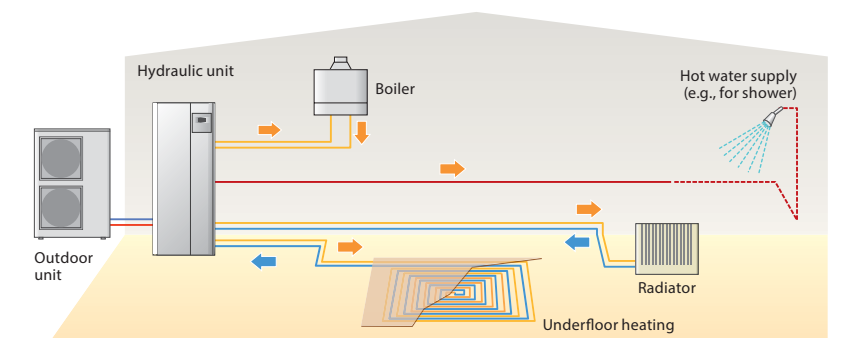
**Single heating & domestic hot water
supply**
Radiator + domestic hot water supply



**2-emitter simultaneous heating
(Individual control) & domestic hot water
supply**
Radiator + domestic hot water supply



**Boiler connected to heating (Boiler + Heating)
and domestic hot water supply**

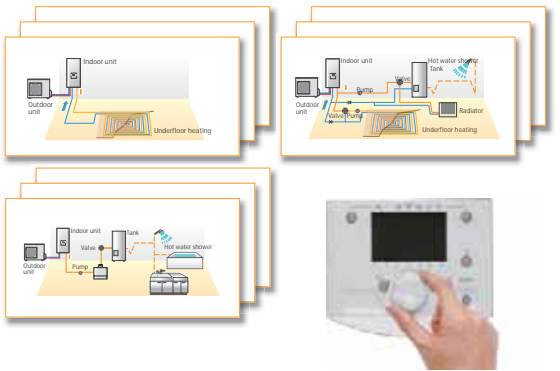


*The hydraulic layouts shown are mainly representation. Please check with local dealer for actual hydraulic connections.

Simple installation

Presetting configurations

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



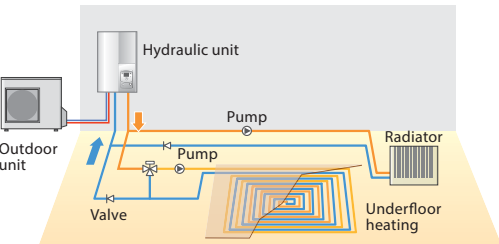
8 simple patterns for system presetting (Duo heating: 12 patterns)

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
- Pool heating and cooling option
- Cascade connection only available in High Power models.

Outdoor temperature simulation

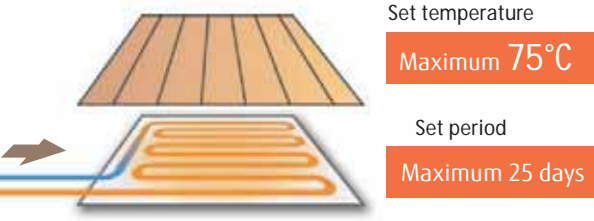
It verifies that each unit operates properly under the set conditions and expected outdoor air temperature when the system is actually assembled.



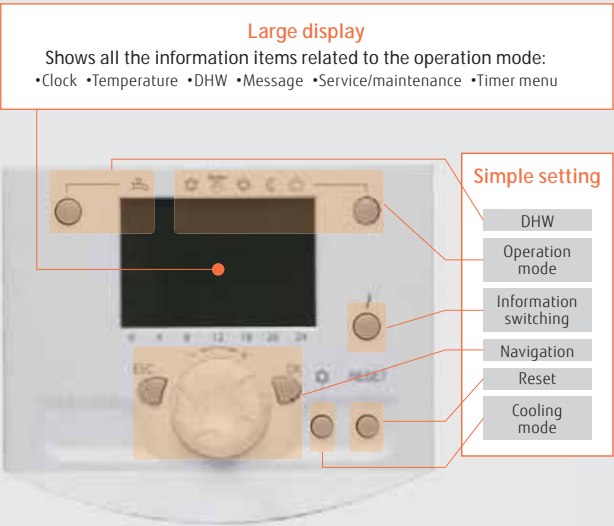
The outdoor temperatures can be simulated in the range of -50°C to +50°C.

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 setting



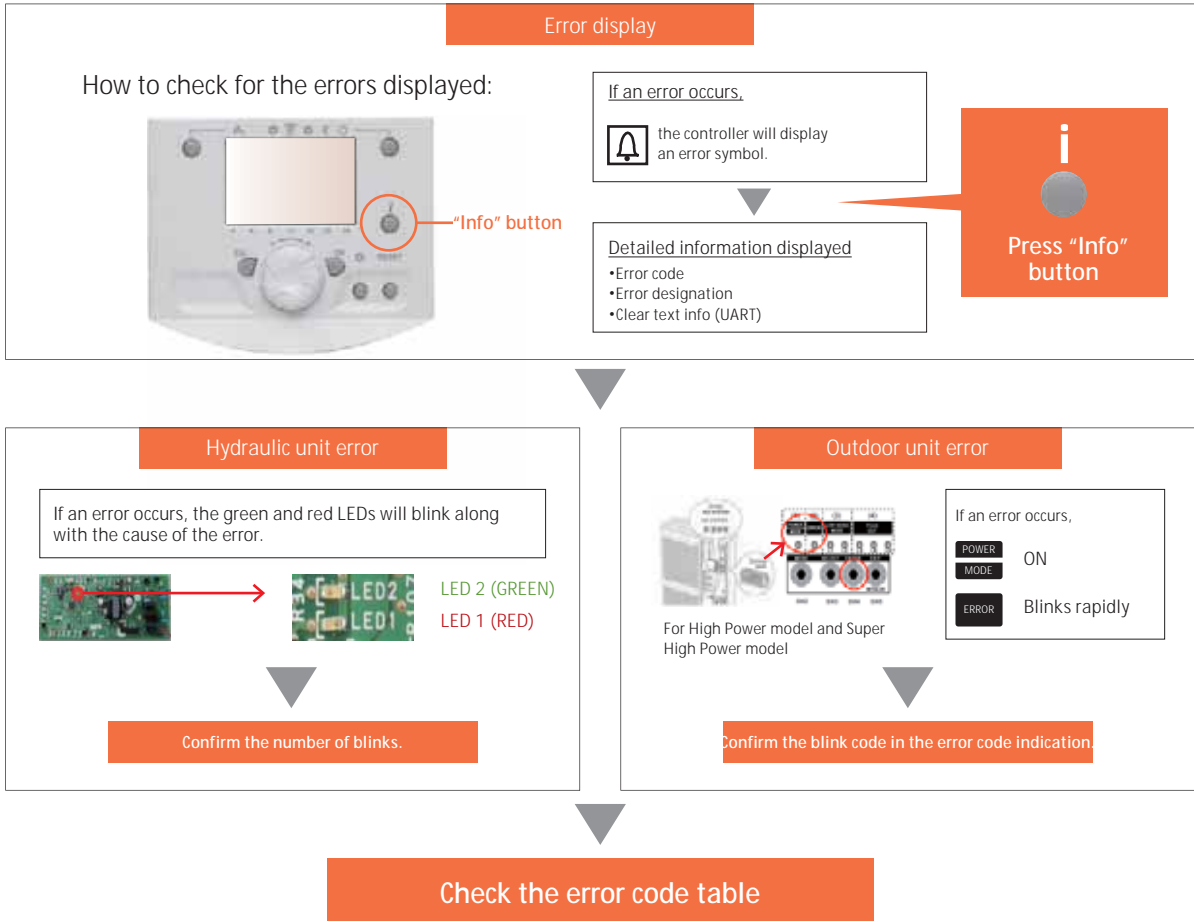
	Flow Chart	Example Item
Installers	1 Install Setting	Pump speed setting, Configuration, Heating curve setting, Heat pump shut off
	2 Option Setting	Cooling kit, DHW kit, Boiler kit, Swimming pool kit
	3 Convenient Function	Automatic heating curve setting, Underfloor controlled driving, Outdoor temperature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

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

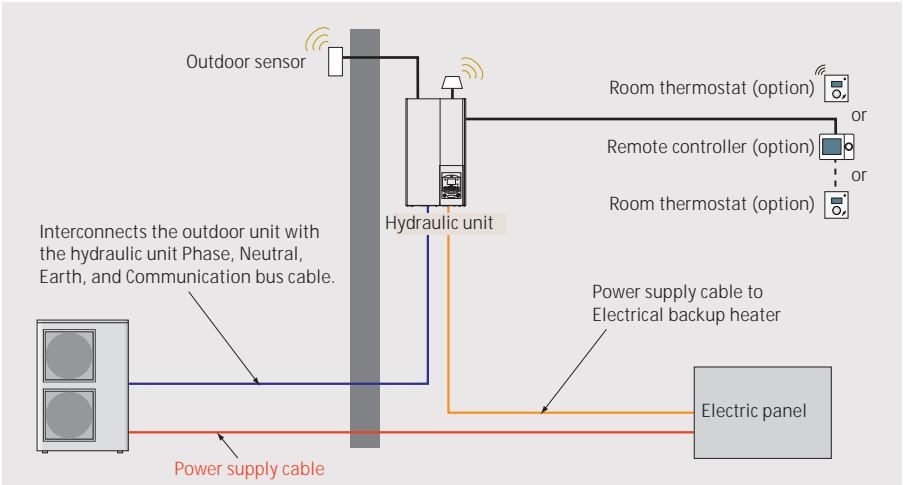
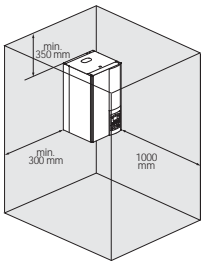


Installation requirements

Installation of equipment & electrical wiring

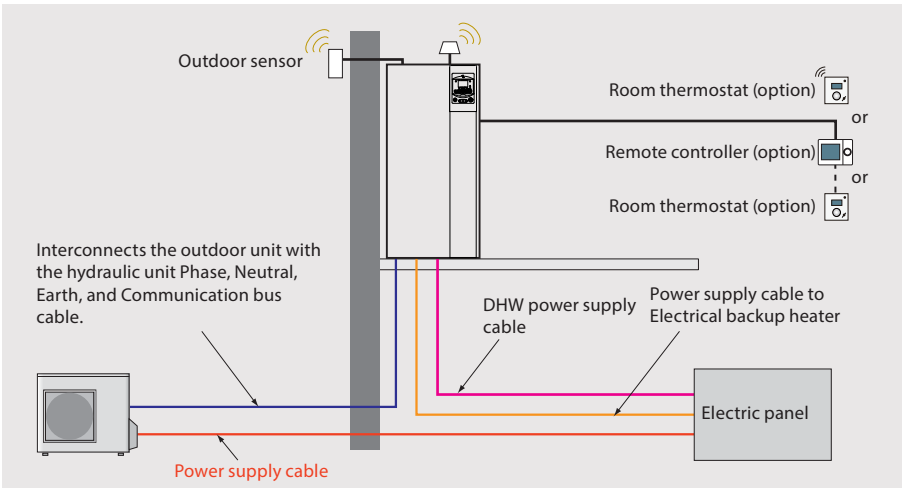
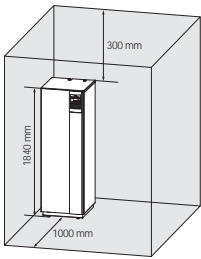
Split type Hydraulic unit

- The Hydraulic unit is hung on the wall.
- Weight ≤ 88 kg (including water)
- Space for maintenance needs to be taken into consideration.



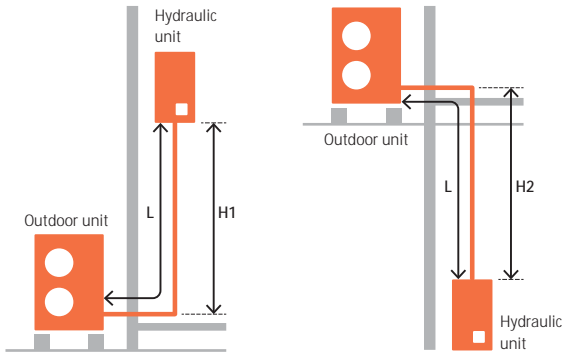
Split DHW Integrated Type Hydraulic Unit

- Floor standing
- Weight ≤ 393 kg (including water)
- Space for maintenance needs to be taken into consideration.

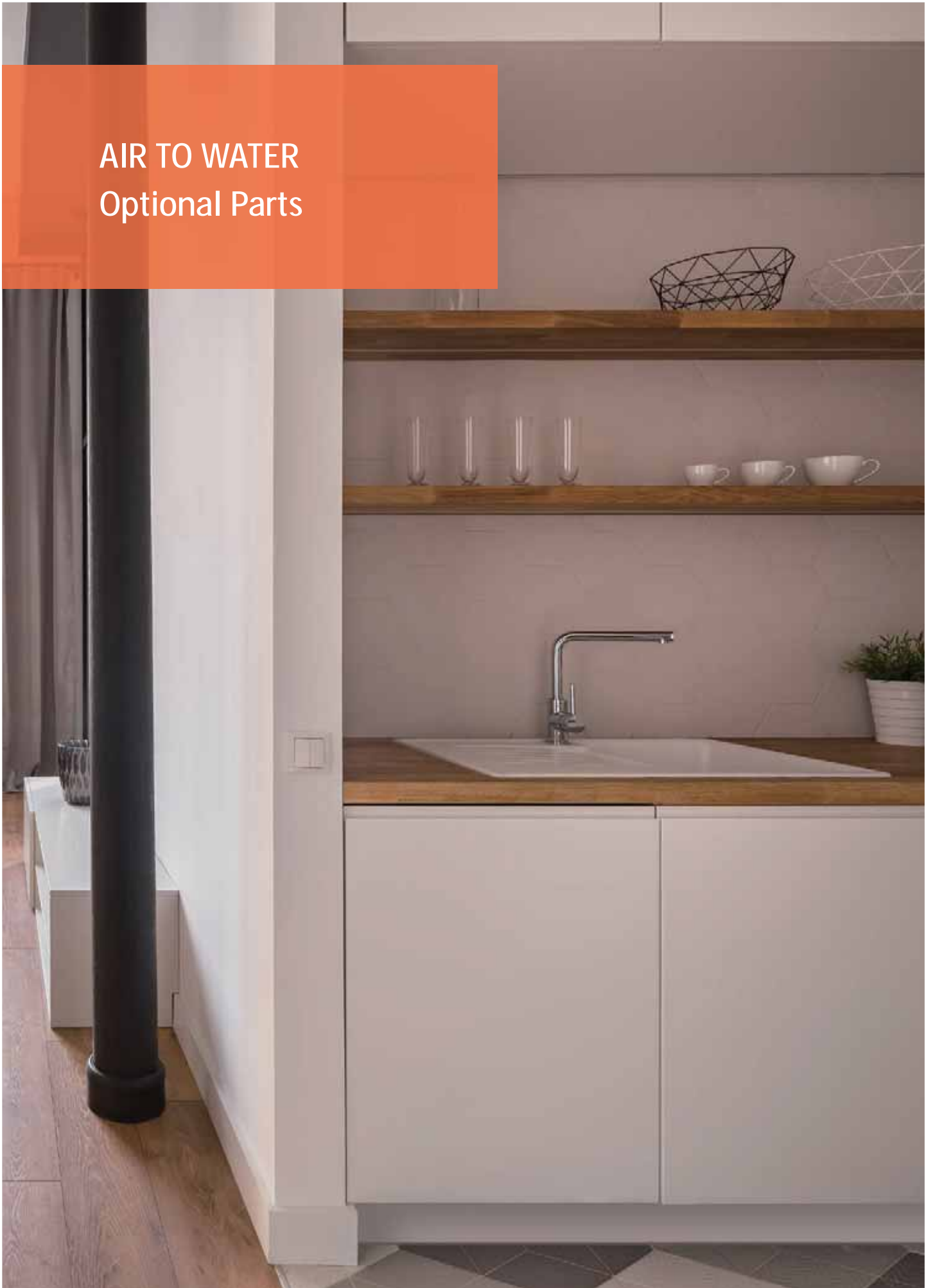


Piping and Wiring split type



















Series	Capacity range (kW)	Pipe diameter (Liquid/Gas) (mm)	H1 (m)	H2 (m)	L (m)
R32 Comfort	5	6.35/12.70	+20	-20	3-30
	6				
	8				
High Power	10	9.52/15.88	+15	-15	5-20
	11				
	14				
Super High Power	16	9.52/15.88	+15	-25	5-30
	15				
	17				

















AIR TO WATER Optional Parts



Optional Parts

Product Name		Model Name	Split Type												Split DHW Integrated Type											
			Super High Power			High Power				R32 Comfort					Super High Power			High Power					R32 Comfort			
			10		30	10		30		10					10		30	10		30		10				
			16	15	17	11	14	11	14	16	5	6	8	10	16	15	17	11	14	11	14	16	5	6	8	10
Second circuit Kit		UTW-KZSXE	-	-	-	●	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	
		UTW-KZDXE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●	●	
		UTW-KZSXJ	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		UTW-KZDXJ	-	-	-	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-	-	-	-	
Boiler connection kit		UTW-KBSXD	-	-	-	●	●	●	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	
		UTW-KBDXD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	●	●	●	●	●	●	●	
		UTW-KBSXJ	●	●	●	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-	-	-	-	
Balancing vessel		UTW-TEVXA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
DHW kit		UTW-KDWXD (External)	●	●	●	●	●	●	●	●	●	●	●	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	
DHW tank	200 Liters 300 Liters 	UTW-T20AXH UTW-T30AXH	●	●	●	●	●	●	●	●	●	●	●	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	
	200 Liters 300 Liters 	UTW-T20BXH UTW-T30BXH	●	●	●	●	●	●	●	●	●	●	●	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	
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	-	-	-	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Product Name	Model Name	Split Type												Split DHW Integrated Type											
		Super High Power			High Power				R32 Comfort					Super High Power			High Power				R32 Comfort				
		10	30		10	30			10					10	30		10	30			10				
		16	15	17	11	14	11	14	16	5	6	8	10	16	15	17	11	14	11	14	16	5	6	8	10
Cascade slave kit (incl. LPB clip)	 UTW-KCSXE	-	-	-	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMI kit	 UTW-KHMXE*2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Remote controller	Wired  UTW-C74TXF*2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Wireless  UTW-C74HXF*2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Room thermostat	Wired  UTW-C55XA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Wireless  UTW-C58XD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Outdoor sensor transmitter	 UTW-MOSXD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
RF modules for BSB-Port	 UTW-MRCXD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Web server	 UTW-KW1XD UTW-KW4XD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
LPB clip	 UTW-KL1XD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MODBUS® clip	 UTW-KMBXJ	-	-	-	•*5	•*5	•*5	•*5	•*5	-	-	-	-	-	-	-	•*5	•*5	•*5	•*5	•*5	-	-	-	-
Service tool (incl. OC1700 Adapter)	 UTW-KSTXD	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3	•*3
Service tool software	 UTW-KPSXD	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4	•*4
External connect kit	UTY-XWZXZ2	-	-	-	•	•	•	•	•	-	-	-	-	-	-	-	•	•	•	•	•	-	-	-	-
	UTY-XWZXZ3	•	•	•	-	-	-	-	-	-	-	-	-	•	•	•	•	•	•	•	-	-	-	-	•
Electrical backup heater relay	 UTW-KBHXL	-	-	-	-	-	-	-	-	•	•	•	•	-	-	-	-	-	-	-	-	•	•	•	•

*1: Split DHW integrated type supplies DHW without the DHW kit and DHW tank.
*2: Includes 19 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.
*3: UTW-KL1XD is required for the connection.
*4: UTW-KW1XD or UTW-KW4XD is required for the connection.
*5: Additional Spare parts 9708302034 (Analogue interface PCB) and 109696 (connection wire) are required.

•: Available -: Not Available