Residential

AIR TO WATER

AIR TO WATER

Residential

FUJITSU GENERAL LIMITED

AIR TO WATER Overview

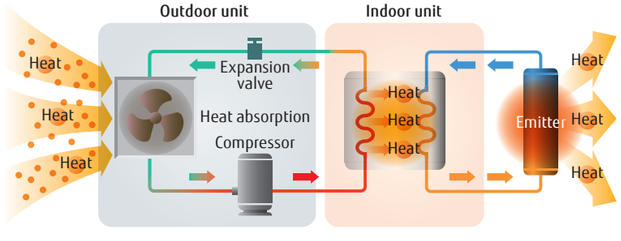
Solutions that meet a variety of needs

Water heated by Air to water using clean energy is delivered reliably and comfortably throughout the house, including the living room.

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.

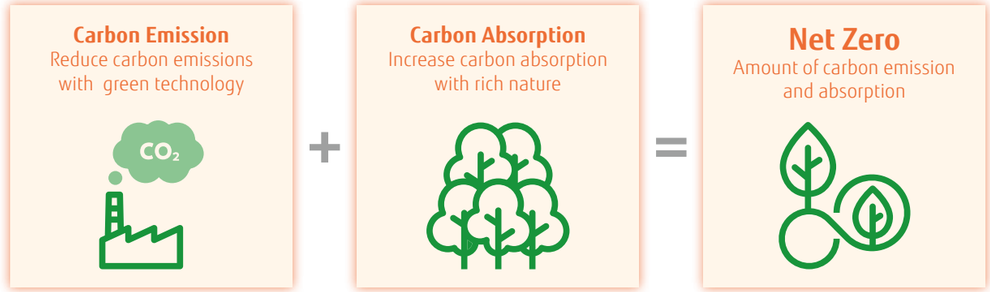


Our Goal

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.



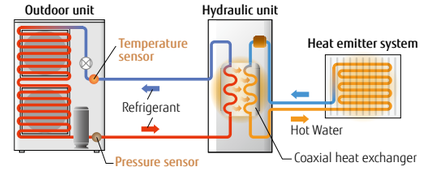
Fujitsu General's ATW system will provide the best solutions that are friendly to the environment and people with products conscious of decarbonisation.

The Choice of ATW

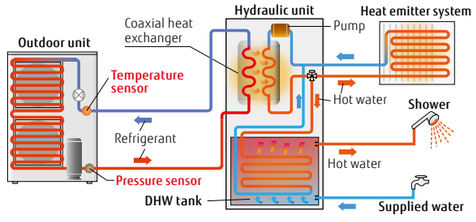
Optimized refrigerant cycle operation

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

Split Type

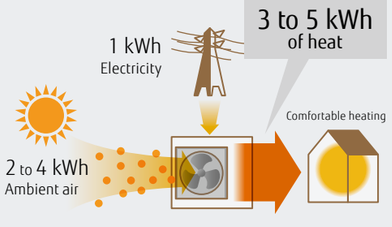


Split DHW Integrated Type



What is a heat pump?

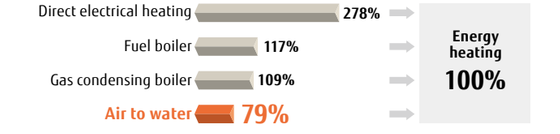
A heat pump extracts heat energy from the atmosphere. It requires only 1 kW of electricity to generate 3 to 5 kW of thermal energy.



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%

AIR TO WATER Lineup

Type	Split Type						Split DHW Integrated Type					
	Comfort Series		Super High Power Series		High Power Series		Comfort Series		Super High Power Series		High Power Series	
Hydraulic unit												
Outdoor unit												
Capacity range	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	16 kW	15/17 kW	11/14 kW	11/14/16 kW
System outline	• 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 underfloor heating and radiators.*		• 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.		• 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.* • 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.		• 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 underfloor heating and radiators.*		• 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.		• 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 • Up to two independent control circuits.* • Cooling operation is possible.* • Operating range is -25 to 35°C.	
Power source	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		Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz
Capacity 5 kW	WSYA050ML3 WOYA060KLT						WGYA050ML3 WOYA060KLT					
Capacity 6 kW	WSYA080ML3 WOYA060KLT						WGYA080ML3 WOYA060KLT					
Capacity 8 kW	WSYA080ML3 WOYA080KLT						WGYA080ML3 WOYA080KLT					
Capacity 10 kW	WSYA100ML3 WOYA100KLT						WGYA100ML3 WOYA100KLT					
Capacity 11 kW					WSYG140DG6 WOYG112LHT	WSYK160DG9 WOYK112LCTA					WGYG140DG6 WOYG112LHT	WGYK160DG9 WOYK112LCTA
Capacity 14 kW					WSYG140DG6 WOYG140LCTA	WSYK160DG9 WOYK140LCTA					WGYG140DG6 WOYG140LCTA	WGYK160DG9 WOYK140LCTA
Capacity 15 kW				WSYK170DJ9 WOYK150LJL						WGYK170DJ9 WOYK150LJL		
Capacity 16 kW			WSYG160DJ6 WOYG160LJL			WSYK160DG9 WOYK160LCTA			WGYG160DJ6 WOYG160LJL			WGYK160DG9 WOYK160LCTA
Capacity 17 kW				WSYK170DJ9 WOYK170LJL						WGYK170DJ9 WOYK170LJL		
Approval CEN KEYMARK	●						●					
Approval EHPA						●						●

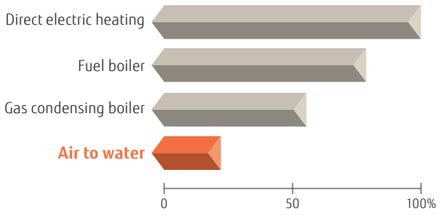
* Please refer to page W-038 and W-039 for optional parts information.

Benefits

Less
CO_2 Emissions

Air to water is an environmentally friendly system that emits substantially less carbon dioxide than conventional gas and hydrocarbon combustion systems.

Average annual CO_2 emissions

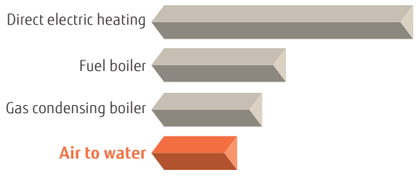


*Calculations based on energy efficiency data provided by the European Programme for Energy Efficiency in EU-27: 89% for fuel boilers; 93% for gas boiler

Low
Running Cost

High-efficiency heat pump technology keeps the running cost of an Air to water system.

Average annual running cost



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

Clean
and Healthy

As an Air to water system does not use a burner to heat water, it does not produce NOx or other harmful substances.

Easy
Installation and Maintenance

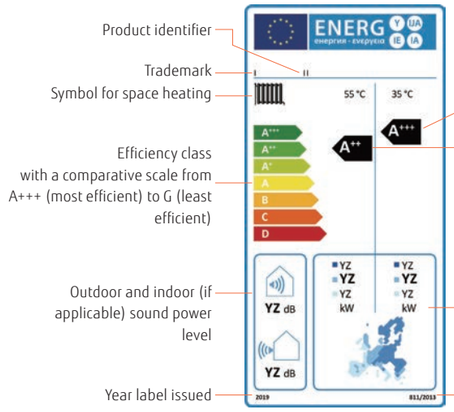
All components are built into a compact outdoor unit or a Hydraulic unit.

Well-designed Hydraulic unit
The sophisticated arrangement of Hydraulic units makes piping and maintenance work easy.

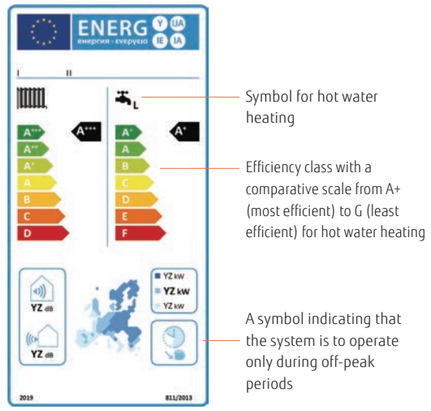
Energy Efficiency Standards

Product labels

Space heaters



Combination heaters



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

EHPA Quality Label

Fujitsu General's Air to water*2 has acquired the EHPA Quality Label*3 through testing in accordance with the International Standards EN14511 and EN17025. The EHPA Quality Label*3 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 BWP*4, 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)

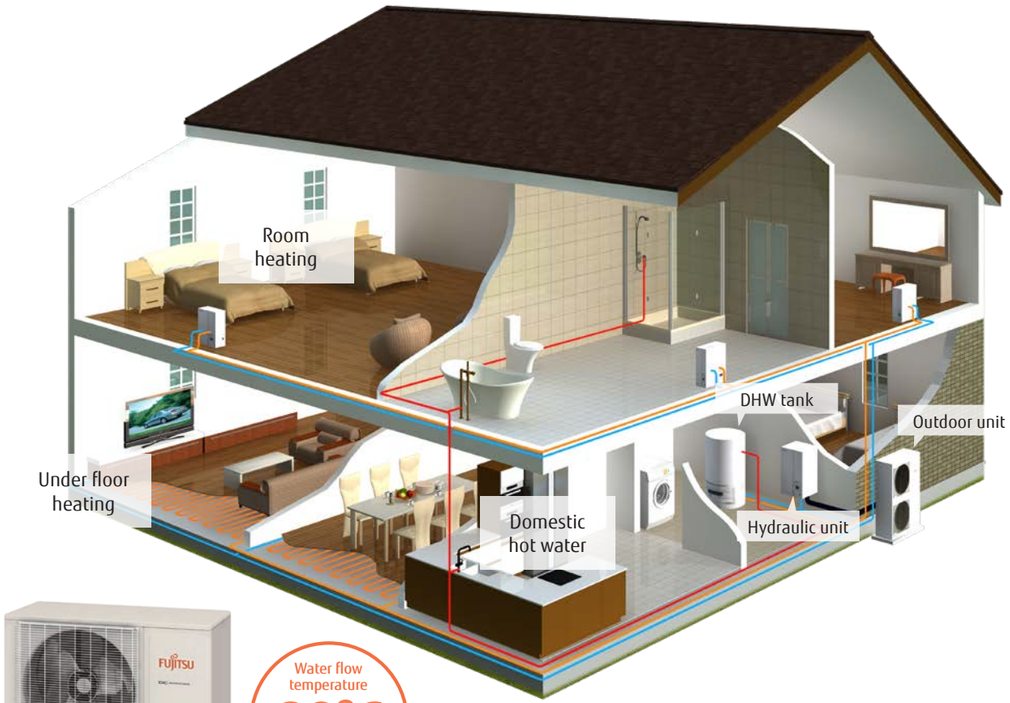
The CEN Heat Pump KEYMARK

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 Air to water*5 has acquired the KEYMARK certificate*6.

*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.



Water flow temperature
60°C

Super High Power Series
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.

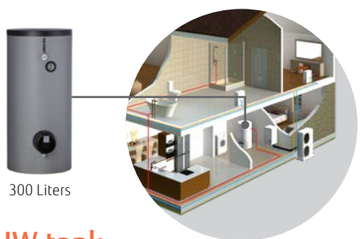
Floor heating and domestic hot water supply

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

*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.



+ DHW tank

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

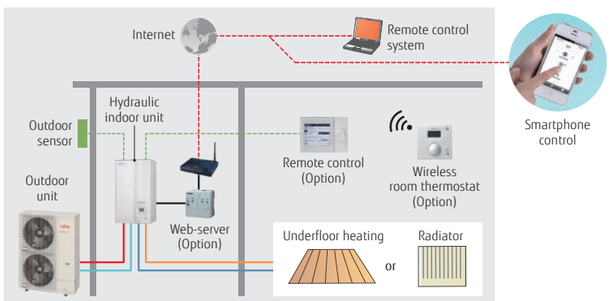
+ Boiler

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

* Please refer to page W-038 and W-039 for optional parts information.

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

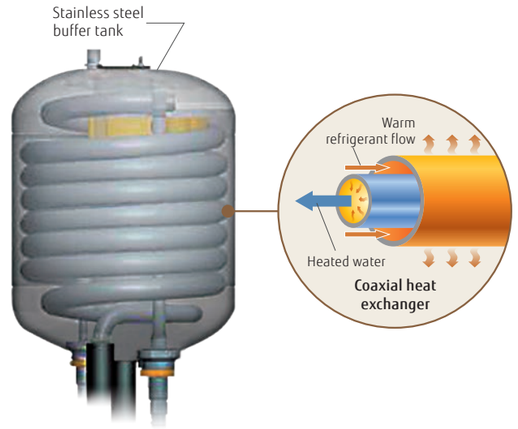
To meet the diverse needs of customers, we offer a variety of control options, such as individual control and remote control options.

High-Efficiency Technology

Twin-Rotary Compressor

Linear Control Injection Port

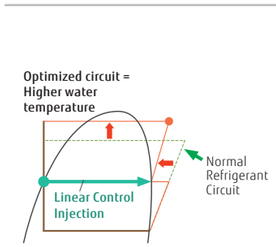
High-durability coaxial heat exchanger

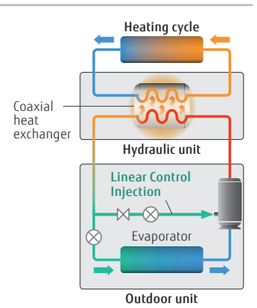


For Outdoor unit

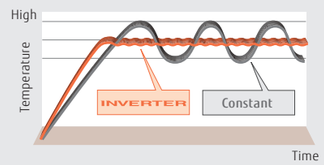
Twin-Rotary Compressor with Linear Control Injection Port

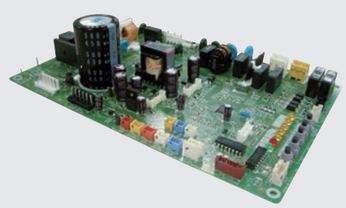
The compressor achieves a high condensing temperature without overheating the discharge gas temperature due to the Linear control injection process used during compression. This makes the condensing temperature higher than in a normal circuit. Higher water temperatures can be achieved by controlling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





DC inverter technology controls temperatures precisely.





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

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

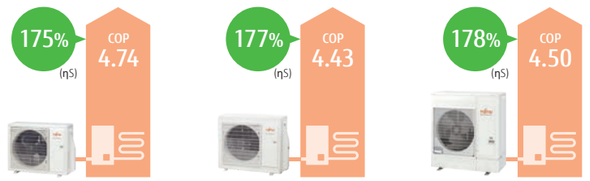
Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

Energy efficiency class 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

5/6 kW | 8 kW | 10 kW

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

Hydraulic unit
Single phase

Outdoor unit
Single phase
5/6 kW

Outdoor unit
Single phase
8 kW

Outdoor unit
Single phase
10 kW

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	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
-7°C/55°C Radiator*1	Heating capacity	kW	3.90	4.25	5.30	8.00
	Input power		2.11	2.25	2.79	4.10
	COP		1.85	1.89	1.90	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	Hydraulic unit	dB(A)	40	-	40	-	40	-	40	-
	Outdoor unit		57	-	57	-	60	-	62	-

Hydraulic 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	13.2/30.0
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	55
Water pipe connection diameter	Flow/Return	mm	Ø25.4/Ø25.4	Ø25.4/Ø25.4	Ø25.4/Ø25.4	Ø25.4/Ø25.4
Backup heater	Capacity	kW	3.0	3.0	3.0	3.0

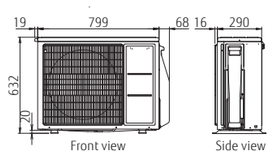
Outdoor unit specifications						
Power source			Single phase, ~230 V, 50 Hz			
Current	Max.	A	13.0	13.0	18.0	19.0
Dimensions H × W × D		mm	632 × 799 × 290	632 × 799 × 290	716 × 820 × 315	998 × 940 × 320
Weight (Net)		kg	39	39	42	62
Refrigerant	Type (Global Warming Potential)		R32 (675)	R32 (675)	R32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

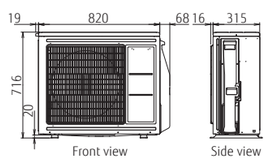
Dimensions

(Unit: mm)

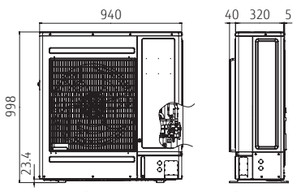
Outdoor unit:
WOYA060KLT



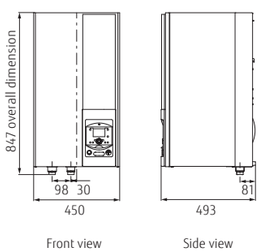
WOYA080KLT



WOYA100KLT



Hydraulic unit:
WSYA050ML3/WSYA080ML3/WSYA100ML3

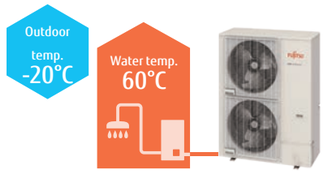


Split Type
Super High Power Series

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.



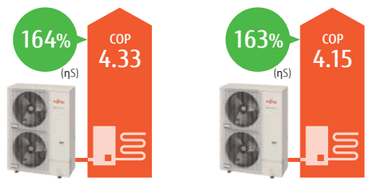
Super High Power Series

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



3-phase 15 kW class

Single phase 16 kW class

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
	Outdoor unit		WOYG160LJL	WOYK150LJL	WOYK170LJL
Capacity range			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
-7°C/55°C Radiator*1	Heating capacity	kW	10.90	13.20	14.20
	Input power		5.89	6.77	7.40
	COP		1.85	1.95	1.92

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

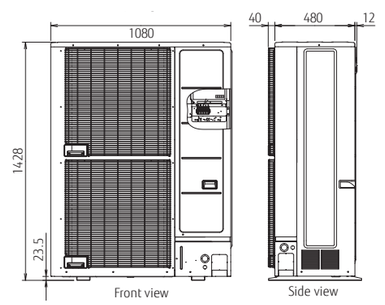
Hydraulic unit specifications					
Power source			Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	
Dimensions H × W × D		mm	805 × 450 × 471	805 × 450 × 471	
Weight (Net)		kg	52.5	52.5	
Water circulation	Min./Max.	L/min	26.4/57.8	24.0/54.2	27.3/61.4
Buffer tank capacity		L	22	22	
Expansion vessel capacity		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)		
Operating range	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)

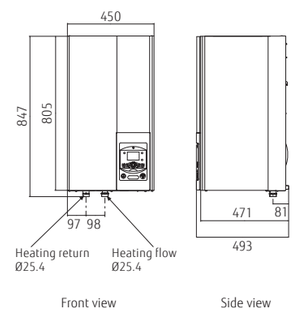
Outdoor unit:
Single phase: WOYG160LJL
3-phase: WOYK150LJL/WOYK170LJL



Front view

Side view

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



Front view

Side view

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 Power Series

High COP

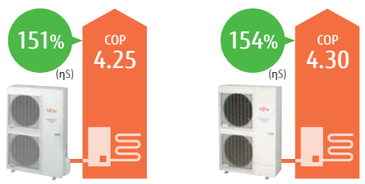
Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

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



Single phase 11 kW class

3-phase 11 kW class

Hydraulic unit:
WSYG140DG6 / [3-phase] WSYK160DG9
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

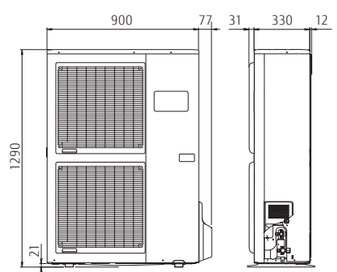
Model Name				WSYG140DG6	WSYG140DG6	WSYK160DG9	WSYK160DG9	WSYK160DG9
	Outdoor unit			WOYG112LHT	WOYG140LCTA	WOYK112LCTA	WOYK140LCTA	WOYK160LCTA
Capacity range				11	14	11	14	16
7°C/35°C floor heating *1	Heating capacity	kW		10.80	13.50	10.80	13.50	15.17
	Input power			2.54	3.23	2.51	3.20	3.70
	COP			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
-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	Hydraulic unit		dB(A)	46		46		46		46		46	
	Outdoor unit			68		69		69	68	70	68	71	
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		27.4/54.8	
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		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		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

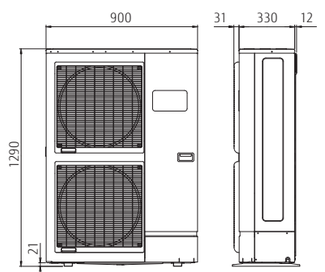
(Unit: mm)

Outdoor unit:
Single phase: WOYG112LHT/WOYG140LCTA



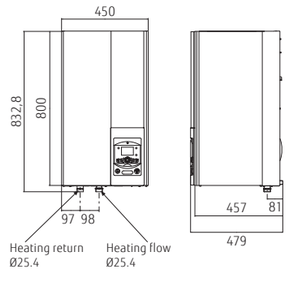
Front view Side view

3-phase: WOYK112LCTA/WOYK140LCTA/WOYK160LCTA



Front view Side view

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



Front view Side view

Split 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

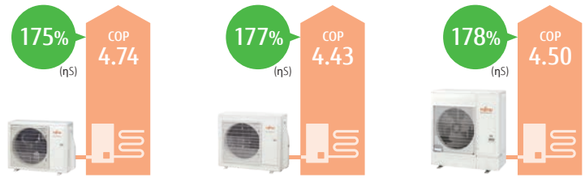
Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

Energy efficiency class: 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

5/6 kW | 8 kW | 10 kW

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

Hydraulic unit
Single phase

Outdoor unit
Single phase
5/6 kW

Outdoor unit
Single phase
8 kW

Outdoor unit
Single phase
10 kW

Specifications

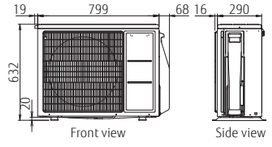
Model Name				WGYA050ML3	WGYA080ML3	WGYA080ML3	WGYA100ML3			
	Hydraulic unit / Outdoor unit			WOYA060KLT	WOYA060KLT	WOYA080KLT	WOYA100KLT			
Capacity range				5	6	8	10			
7°C/35°C floor heating *1	Heating capacity	kW		4.50	5.50	7.50	9.50			
	Input power			0.949	1.18	1.69	2.11			
	COP			4.74	4.65	4.43	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			
-7°C/55°C Radiator*1	Heating capacity	kW		3.90	4.25	5.30	8.00			
	Input power			2.11	2.25	2.79	4.10			
	COP			1.85	1.89	1.90	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	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 (ηwh)			%	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
Electrical heater capacity	Heating		kW	3.0		3.0		3.0		3.0
	DHW			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
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	Diameter	Liquid	mm	6.35		6.35		6.35		9.52
		Gas		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
Operating range		Heating	°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.

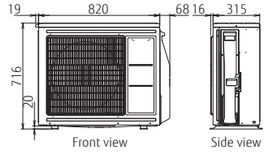
Dimensions

(Unit: mm)

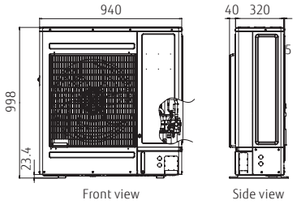
Outdoor unit:
WOYA060KLT



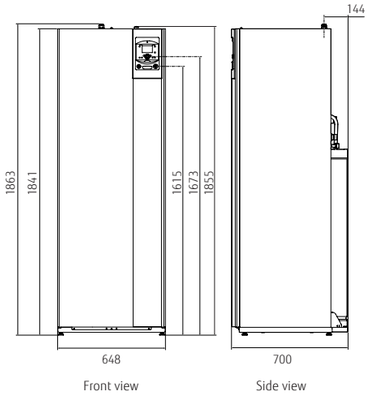
WOYA080KLT



WOYA100KLT



Hydraulic unit:
WGYA050ML3/WGYA080ML3/WGYA100ML3



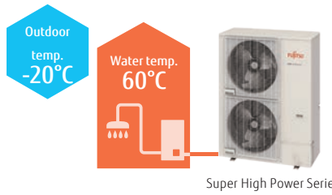
Split DHW Integrated Type

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.



Super High Power Series

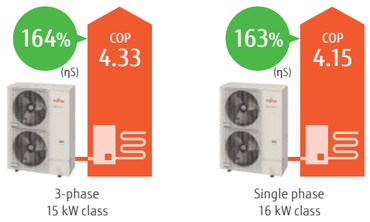
High COP

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



3-phase 15 kW class

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.

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

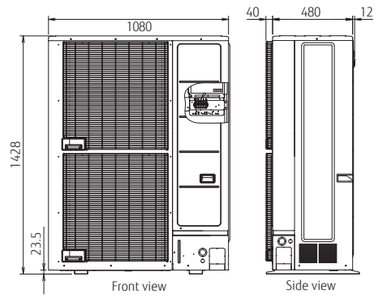
Model Name				WGYG160DJ6	WGYK170DJ9	WGYK170DJ9
		Hydraulic unit		WOYG160LJL	WOYK150LJL	WOYK170LJL
Capacity range				16	15	17
7°C/35°C floor heating *1	Heating capacity	kW		16.00	15.00	17.00
	Input power			3.86	3.46	4.10
	COP			4.15	4.33	4.15
2°C/35°C floor heating *1	Heating capacity	kW		13.30	13.20	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
-7°C/55°C Radiator*1	Heating capacity	kW		10.90	13.20	14.20
	Input power			5.89	6.77	7.40
	COP			1.85	1.95	1.92
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 (ηwh)			%	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	27.3/61.4
DHW capacity			L	190		
Electrical heater capacity		Heating	kW	6.0 (3.0 kW × 2 pcs.)	9.0 (3.0 kW × 3 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	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)	
		Charge	kg	3.80	3.80	
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	5/30	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/

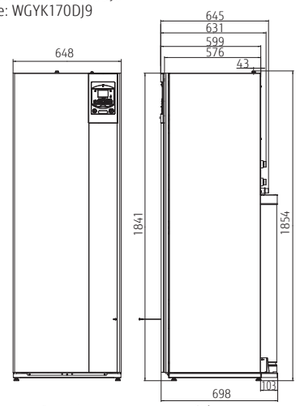
Dimensions

(Unit: mm)

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

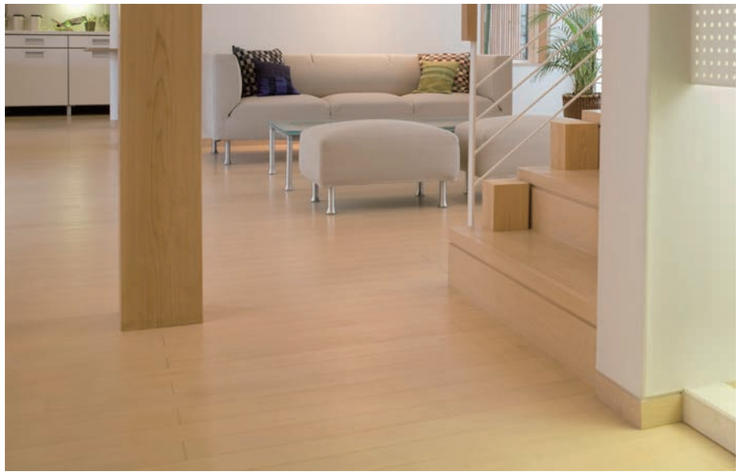


Hydraulic unit:
Single phase: WGYG160DJ6
3-phase: WGYK170DJ9



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 Power Series

High COP

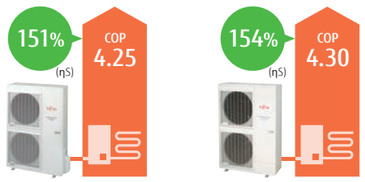
Heat pumps of ATW Systems work more efficiently and consume less energy than conventional heating systems.

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

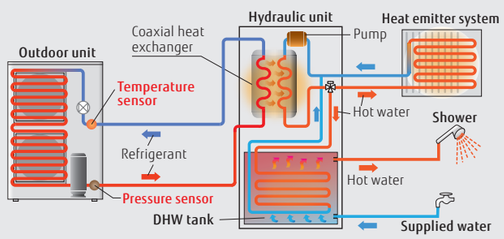


Single phase 11 kW class

3-phase 11 kW class

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

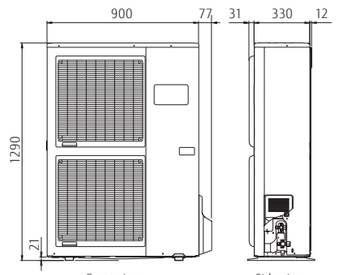
Model Name	Hydraulic unit		WGYG140DG6	WGYG140DG6	WGYK160DG9	WGYK160DG9	WGYK160DG9
	Outdoor unit		WOYG112LHT	WOYG140LCTA	WOYK112LCTA	WOYK140LCTA	WOYK160LCTA
Capacity range			11	14	11	14	16
7°C/35°C floor heating *1	Heating capacity	kW	10.80	13.50	10.80	13.50	15.17
	Input power		2.54	3.23	2.51	3.20	3.70
	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
-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	Hydraulic unit	dB(A)	46	46	46	46	46
	Outdoor unit		68	69	69 68	70 68	71
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	27.4/54.8
DHW capacity		L	190				
Electrical heater capacity	Heating	kW	6.0 (3.0 kW × 2 pcs.)		9.0 (3.0 kW × 3 pcs.)		
	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	mm	Ø9.52				
			Ø15.88				
	Length	m	5/20				
	Length (Pre-charge)	m	15				
	Height difference	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

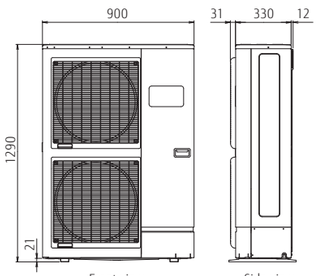
(Unit: mm)

Outdoor unit:
Single phase: WOYG112LHT/WOYG140LCTA



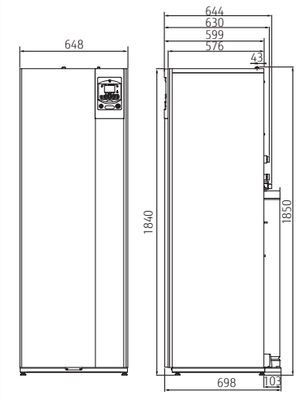
Front view Side view

3-phase: WOYK112LCTA/WOYK140LCTA/WOYK160LCTA



Front view Side view

Hydraulic unit:
Single phase: WGYG140DG6
3-phase: WGYK160DG9



Front view Side view

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

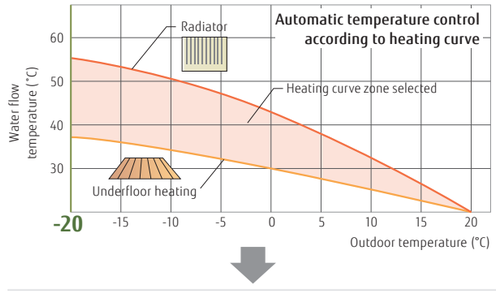
3. Comfort mode
Maintains water temperature at a comfortable level

4. Protection mode
Activates frost protection in standby operation

Useful Features

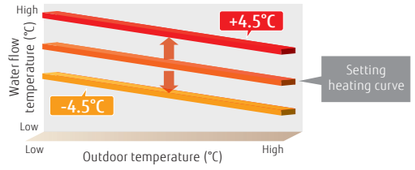
Automatic heating curve control

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

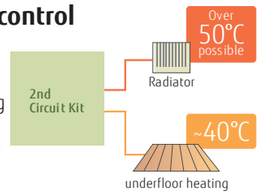
Maintains room temperature by boost start operation during defrosting.

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

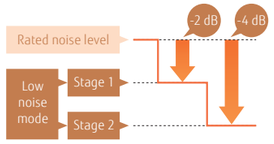


*1: Optional parts required

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

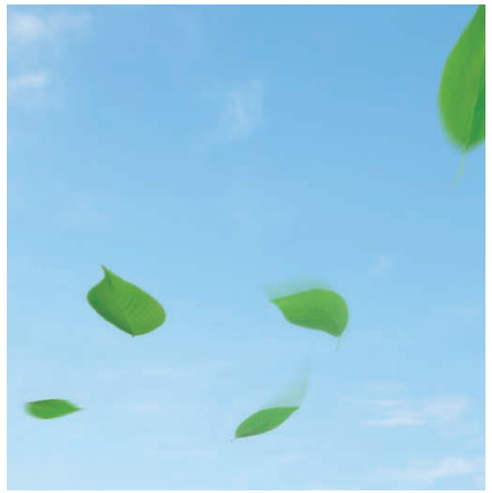
- The timer is easy to set.
- You can select the heating mode in conjunction with various times of the day.

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-038 and W-039 for optional parts information.

Safety Features

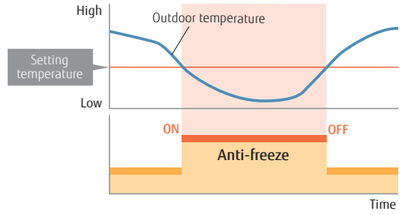
Anti-Legionella function

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

DHW tank 300 L

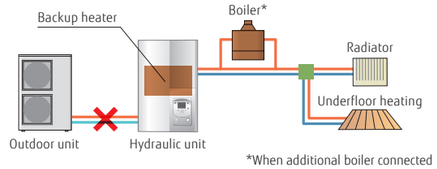
Anti-freeze function

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

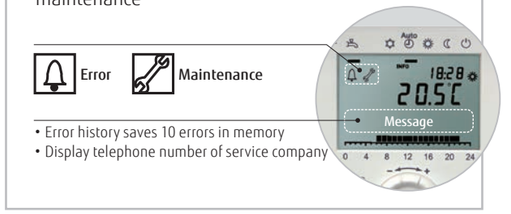
If an outdoor unit fails to operate, a built-in backup heater or an external boiler is activated to supply an uninterrupted supply of hot water to the house.



*When additional boiler connected

Error and Maintenance Alarm

Enables quick error-handling services and maintenance

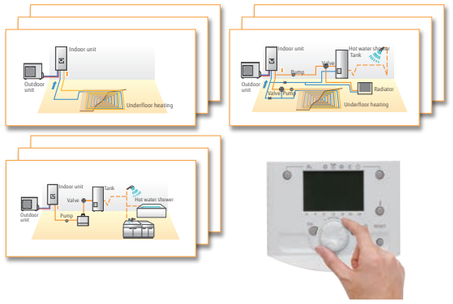


- Error history saves 10 errors in memory
- Display telephone number of service company

Simple installation

Presetting configurations

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



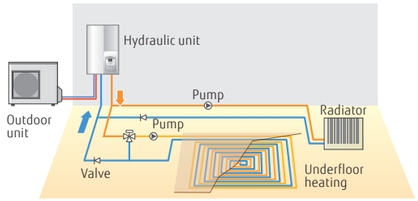
8 simple patterns for system presetting (Pair of heating: 12 patterns)

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

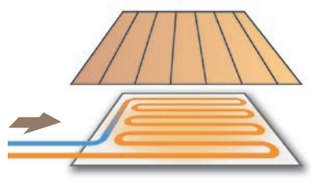
It verifies that each unit operates properly under the set conditions and expected outdoor air temperature when the system is actually assembled.



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.

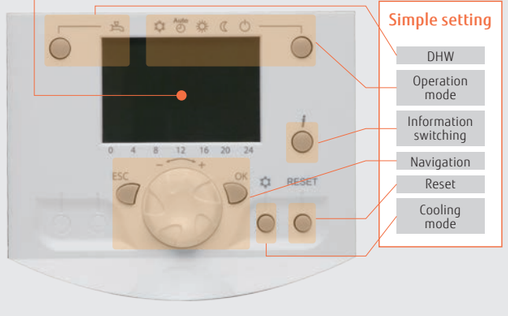


Set temperature
Maximum 75°C

Set period
Maximum 25 days

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

Large display
Shows all the information items related to the operation mode:
•Clock •Temperature •DHW •Message •Service/maintenance •Timer menu



Main operation flow and settings for installers and end users

		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
	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

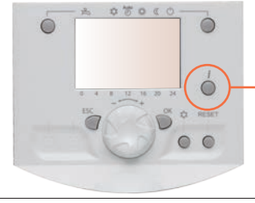
- All hydraulic safety and control components are built in with no additional selection required.
- Lifting bars for installation free of difficulty or risk
- Easy access for maintenance
- Refrigerant pump down operation

Maintenance Support

Diagnostics functions for troubleshooting

Error display

How to check for the errors displayed:



If an error occurs,
the controller will display an error symbol.

Detailed information displayed
•Error code
•Error designation
•Clear text info (UART)

Press "Info" button

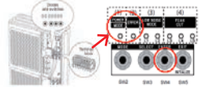
Hydraulic unit error

If an error occurs, the green and red LEDs will blink along with the cause of the error.

LED 2 (GREEN)
LED 1 (RED)

Confirm the number of blinks.

Outdoor unit error



For High Power model and Super High Power model

If an error occurs,
POWER
MODE
ON
ERROR
Blinks rapidly

Confirm the blink code in the error code indication.

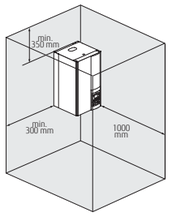
Check the error code table

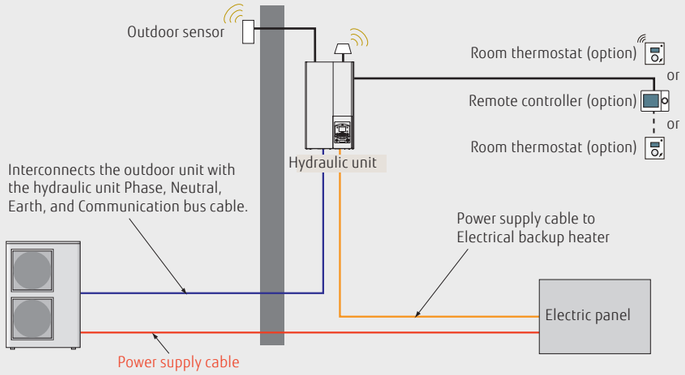
Installation requirements

Installation of equipment & electrical wiring

Split type Hydraulic unit

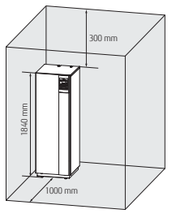
- The Hydraulic unit is hung on the wall.
- Weight ≦ 88 kg (including water)
- Space for maintenance needs to be taken into consideration.

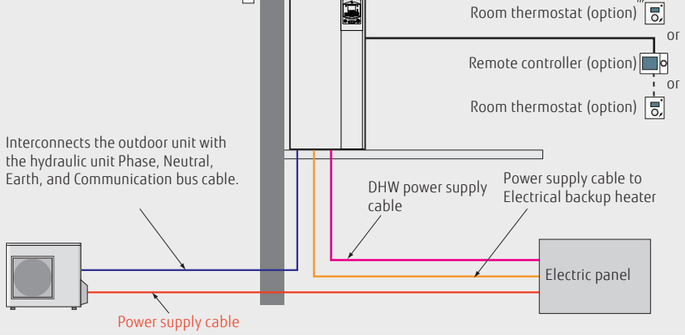




Split DHW Integrated Type Hydraulic Unit

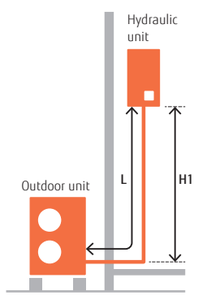
- Floor standing
- Weight ≦ 393 kg (including water)
- Space for maintenance needs to be taken into consideration.

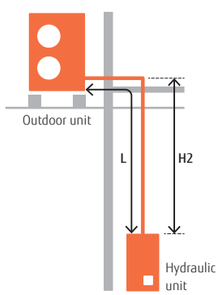




Piping and Wiring Split type

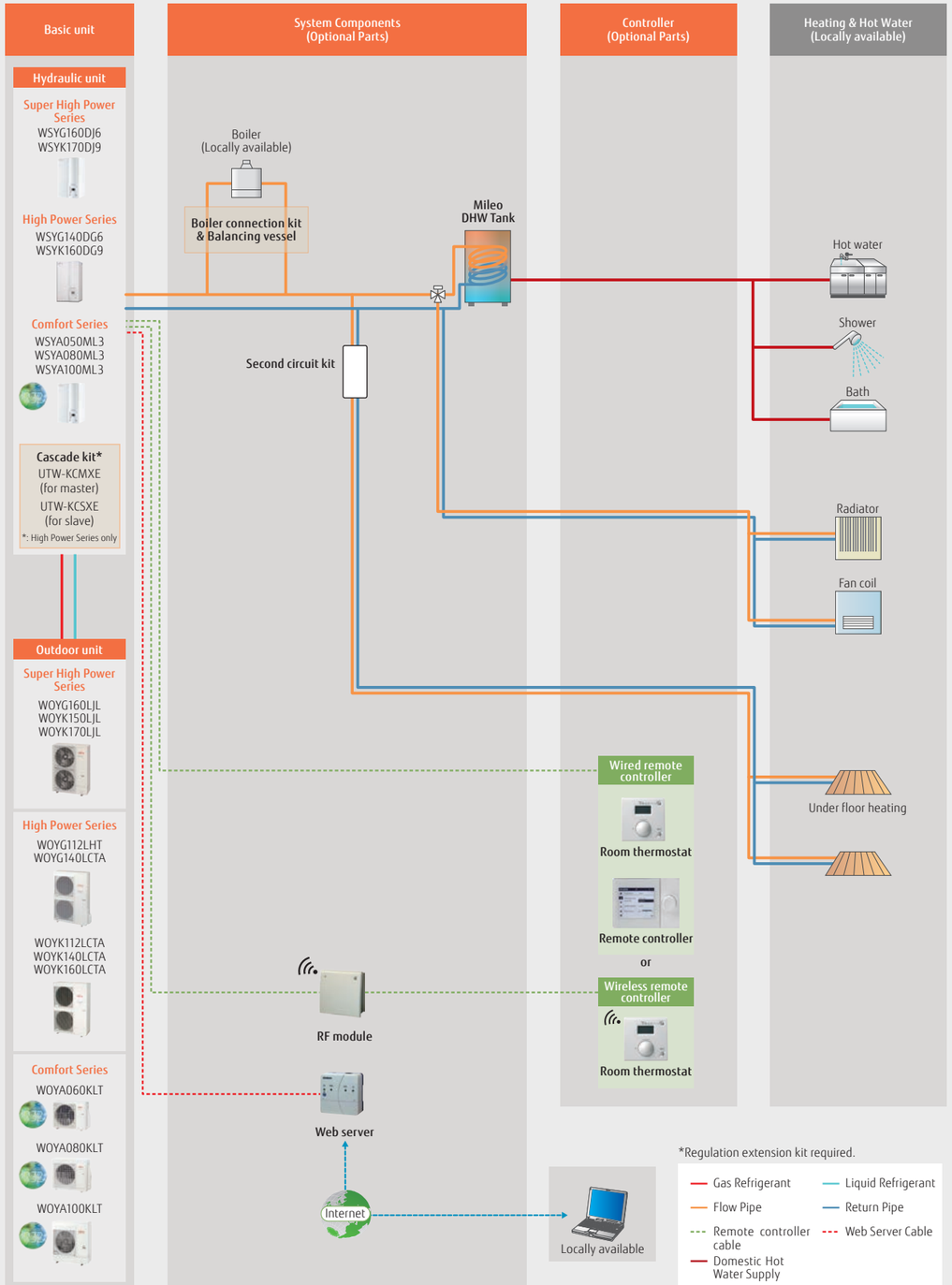
Series	Capacity range (kW)	Pipe diameter (Liquid/Gas) (mm)	H1 (m)	H2 (m)	L (m)
R32 Comfort	5	6.35/12.70	+20	-20	3-30
	6				
	8				
	10	9.52/15.88			
High Power	11	9.52/15.88	+15	-15	5-20
	14				
	16				
Super High Power	15	9.52/15.88	+15	-25	5-30
	16				
	17				



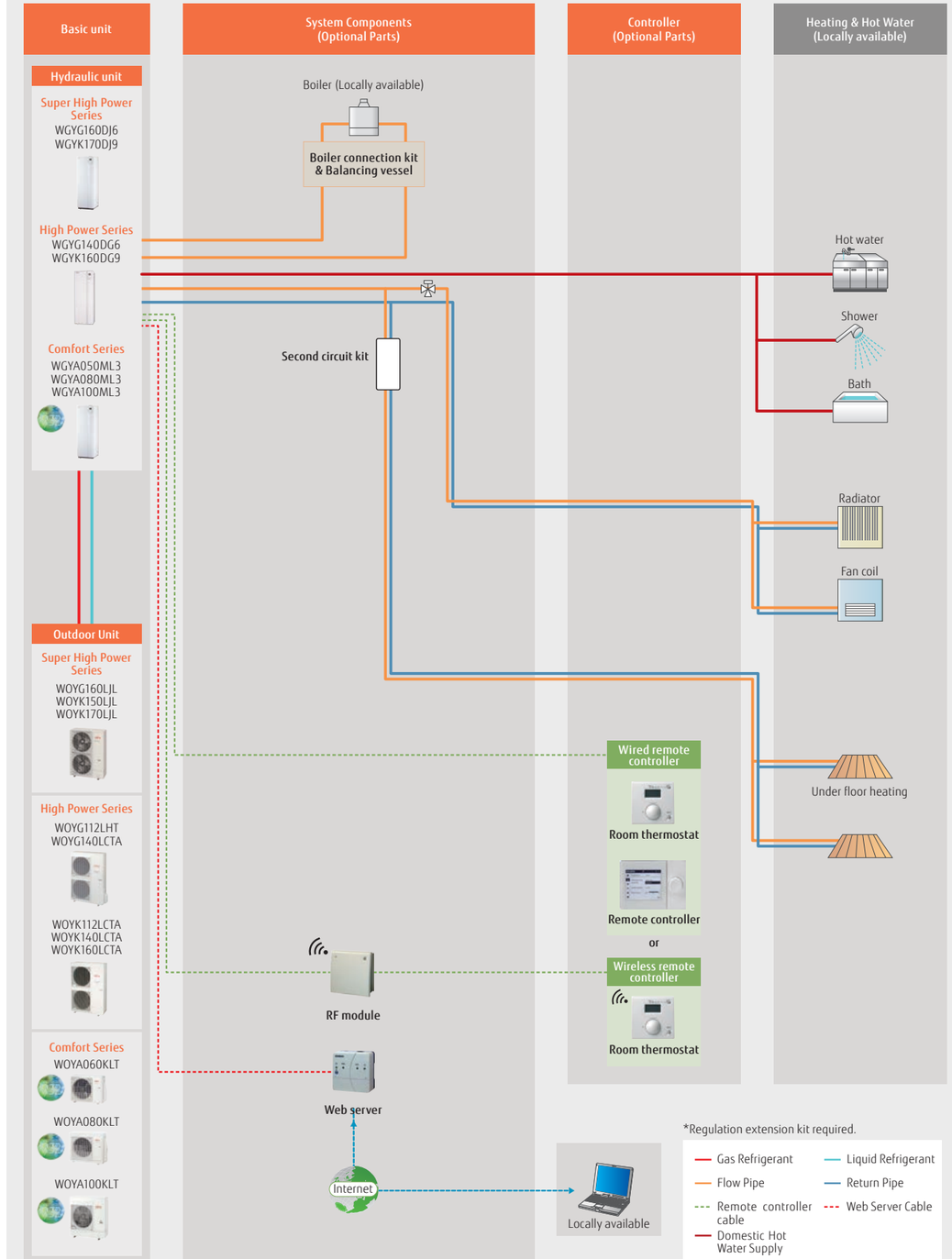


System Configuration

Split Type



Split DHW Integrated Type

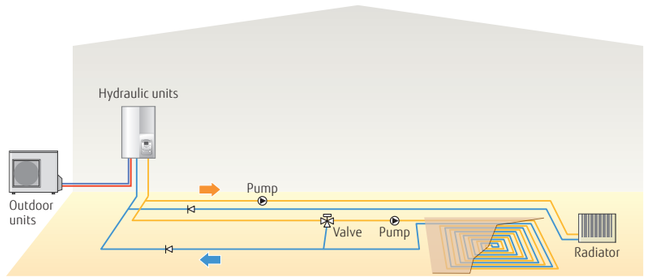


Case Studies

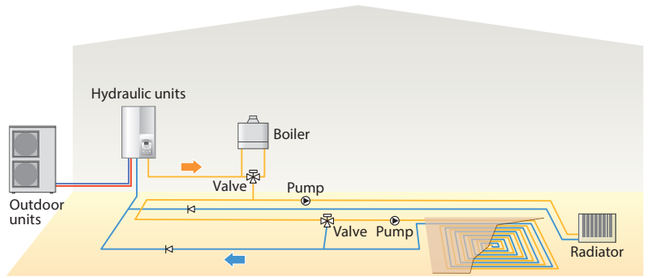
Split Type

2-emitter simultaneous heating (Individual control)

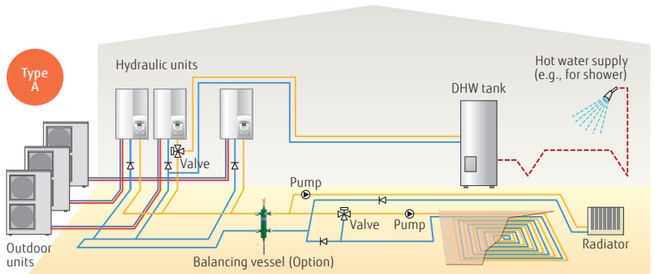
Underfloor heating + Radiator

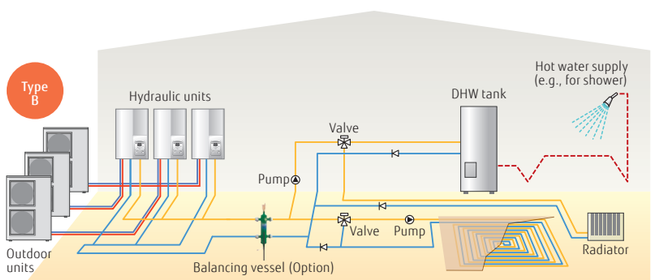


Boiler connected to heating (Boiler + Heating)



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



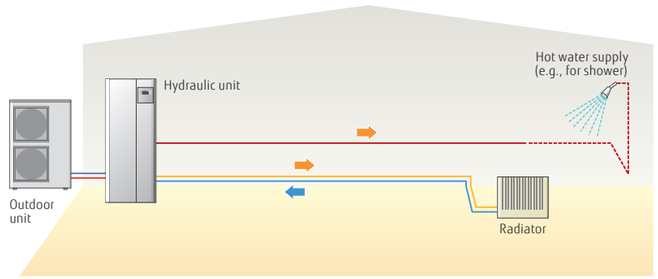


*The hydraulic layouts shown are mainly representation. Please check with local dealer for actual hydraulic connections.

Split DHW Integrated Type

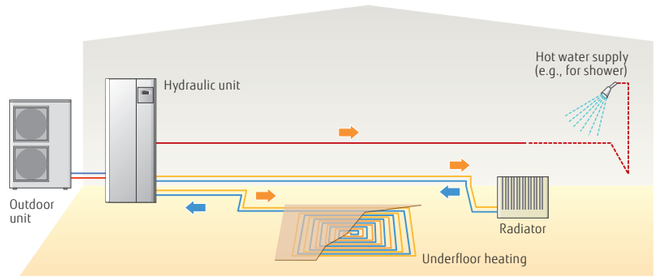
Single heating & domestic hot water supply

Radiator + domestic hot water supply

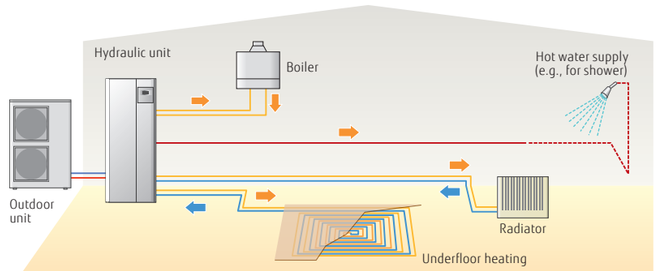


2-emitter simultaneous heating (Individual control) & domestic hot water supply

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.

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

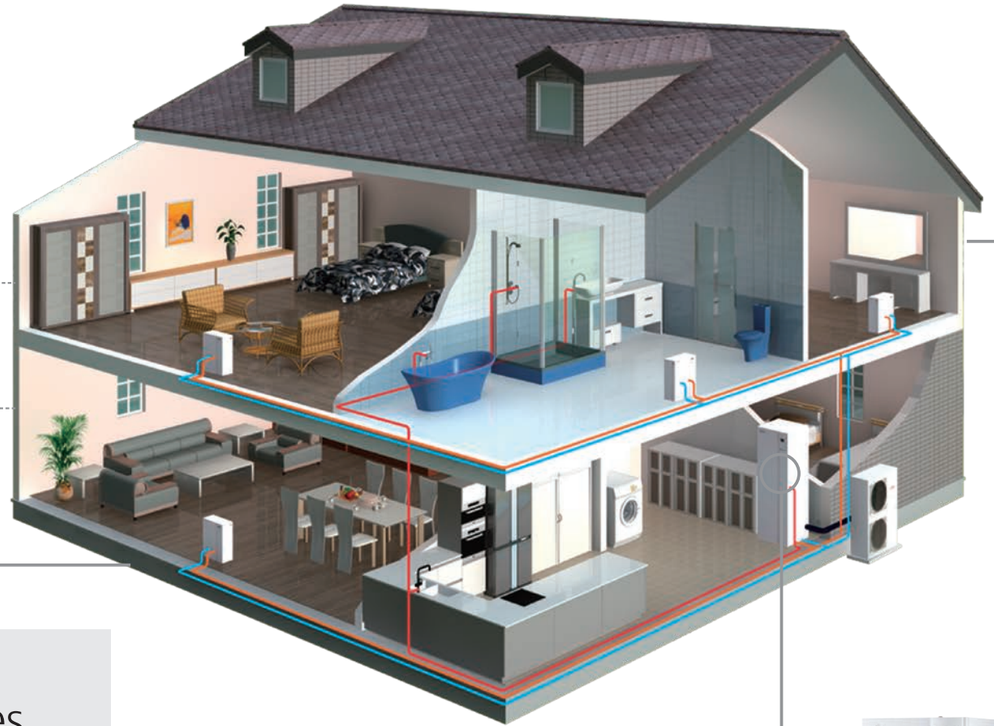
Wireless room thermostat (option)
UTW-C58XA

Wired room thermostat (option)
UTW-C55XA

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

RF module

UTW-MRCXD



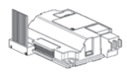
Service & Maintenance Tool

Web server (option)
UTW-KW1XD
UTW-KW4XD

Service tool (option)

UTW-KPSXD*3
software

or



LPB clip (option)
UTW-KL1XD

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

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 Hydraulic unit

Hydraulic unit Controller

Easy-to-set operation modes
- Selecting the heating mode and domestic hot water (DHW) operation

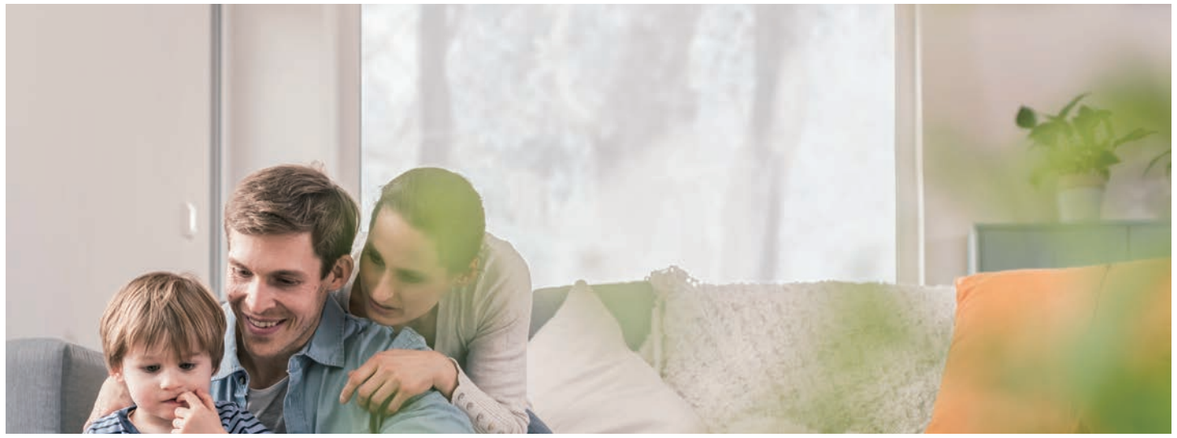
Large liquid crystal display
- Shows operation status
- Shows error messages
- Messages in plain text

Navigation and setting
- Select from heating menu
- Setting Time program

HMI kit (option)
UTW-KHMXE
Supports multiple languages

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.

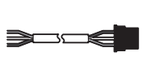
UTW-KDEXE

UTW-KDEXL

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

for Outdoor unit

Drain pan
UTW-KDPXB
It is used to collect and drain condensation water generated by outdoor units.



External connect kit
UTY-XWZXZ2 / UTY-XWZXZ3
The signal input (low noise mode, peak cut) and signal output (compressor operation, base pan heater control) for outdoor units are possible externally.

for Hydraulic 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 piping.

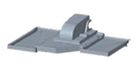
Cascade master/slave kit
Up to 3 hydraulic units can be connected for large-capacity use. It is need to install a primary kit in one unit and a secondary kit in one or two other units.

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

Electrical backup heater relay
UTW-KBHXL
It allows the backup heater for heating at 3 kW as standard can be used at 6 kW.

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		3Ø	1Ø		3Ø			1Ø				1Ø		3Ø	1Ø		3Ø			1Ø			
		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	–	–	–	●*1	●*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	–*2	–*2
DHW tank 200 Liters 300 Liters	UTW-T20AXH UTW-T30AXH	●	●	●	●	●	●	●	●	●	●	●	●	–*2	–*2	–*2	–*2	–*2	–*2	–*2	–*2	–*2	–*2	–*2	–*2
DHW tank 200 Liters 300 Liters	UTW-T20BXH UTW-T30BXH	●	●	●	●	●	●	●	●	●	●	●	●	–*2	–*2	–*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		3Ø	1Ø		3Ø			1Ø				1Ø		3Ø	1Ø		3Ø			1Ø			
		16	15	17	11	14	11	14	16	5	6	8	10	16	15	17	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	●*3	●*3	●*3	●*3
Remote controller Wired	UTW-C74TXF	●*3	●*3	●*3	●*3	●*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	●*3	●*3	●*3	●*3
Room thermostat Wired	UTW-C55XA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Room thermostat Wireless	UTW-C58XA	●*4	●*4	●*4	●*4	●*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	●*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	●*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. OCI700 Adapter)	UTW-KSTXD	●*7	●*7	●*7	●*7	●*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	●*8	●*8	●*8	●*8
External connect kit	UTY-XWZXZ2	–	–	–	●	●	●	●	●	–	–	–	–	–	–	–	●	●	●	●	●	–	–	–	–
	UTY-XWZXZ3	●	●	●	–	–	–	–	–	–	–	–	–	●	●	●	–	–	–	–	–	–	–	–	●
Electrical backup heater relay	UTW-KBHXL	–	–	–	–	–	–	–	–	●	●	●	●	–	–	–	–	–	–	–	–	●	●	●	●

●: Available –: Not Available

*1: The UTW-KREXD (Regulation extension kit) is not included but is required for connection.
*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.
C74HXFhas 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.