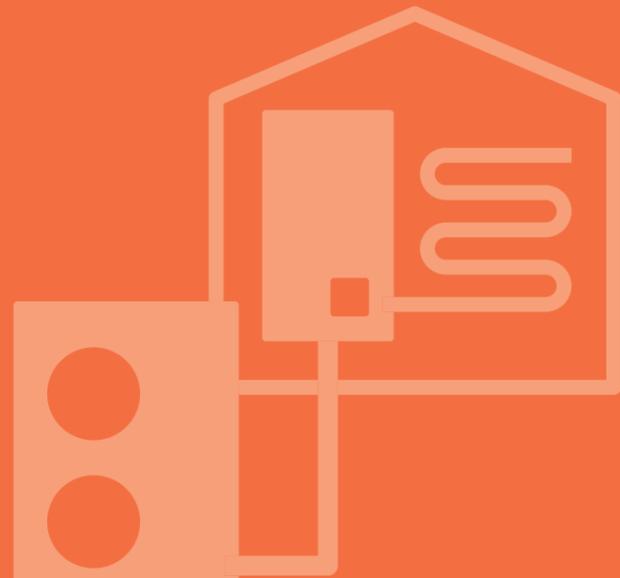


Residential AIR TO WATER

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- W-004 WATERSTAGE™ Lineup
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WATERSTAGE™
Innovative Solution of Domestic Heating
SPLIT TYPE / SPLIT DHW INTEGRATED TYPE

AIR TO WATER
Residential



FUJITSU GENERAL LIMITED

WATERSTAGE™ Overview

Complete Solution meets various needs

The clean energy produced by WATERSTAGE™ reliably delivers "comfort" to all spaces in the home up to the living room, bedrooms, bathroom, and swimming pool.



23 Models

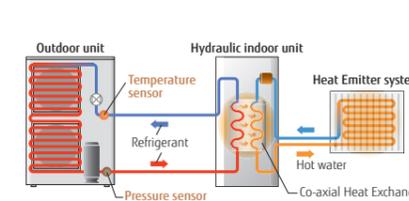
Fujitsu General WATERSTAGE™ Heat Pumps are very efficient, regenerative and varied central heating systems, which absorb the energy mainly from the air.



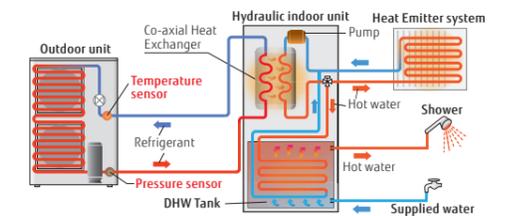
Optimization of refrigerant cycle operation

Super High Power and High Power model achieves high performance and efficiency by adopting twin sensors and control technology corresponding to hot water heating.

Split type

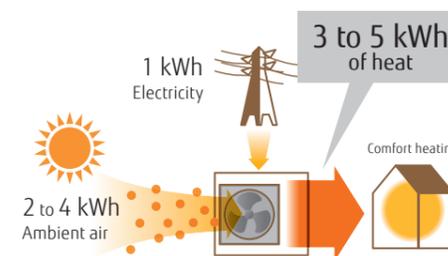


Split DHW Integrated type



What's a Heat Pump ?

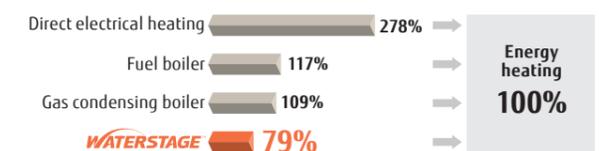
Absorbing free energy from the atmosphere. Heat Pump system requires only 1 kW of electricity to generate 3 to 5 kW thermal energy.



Primary Energy Usage Reduced Drastically!

Proportion of primary energy into heating energy of 100%

Primary Energy Consumption*



*Electricity loss is different due to power plant. Example efficiency of power plant: 36%

WATERSTAGE™ Lineup



Type	Split type			Split DHW Integrated type		
	Super High Power Series	High Power Series	Comfort Series	Super High Power Series	High Power Series	Comfort Series
Hydraulic indoor unit						
Outdoor unit						
Capacity range	15/16/17 kW	11/14 kW 11/14/16 kW	5/6 kW 8 kW 10 kW	15/16/17 kW	11/14 kW 11/14/16 kW	5/6 kW 8 kW 10 kW
System outline	<ul style="list-style-type: none"> • 60°C hot water supply even at -20°C outdoor temperature • 55°C hot water supply even at -22°C outdoor temperature • Different heating system can be used. Like underfloor heating, radiators and others.* • Heating and DHW in one system.* • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cooling operation is possible.* • Operating range is -25 to 35 °C. 	<ul style="list-style-type: none"> • 60°C hot water supply even at -20°C outdoor temperature • Different heating system can be used. Like underfloor heating, radiators and others.* • Heating and DHW in one system.* • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cascade connection up to three systems.* • Cooling operation is possible.* • Operating range is -25 to 35 °C. 	<ul style="list-style-type: none"> • 55°C hot water supply even at -10°C outdoor temperature • Heating and DHW in one system.* • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cooling operation is possible.* • Operating range is -20 to 35 °C. • Different heating system can be used. Like underfloor heating, radiators and others. 	<ul style="list-style-type: none"> • 60°C hot water supply even at -20°C outdoor temperature • 55°C hot water supply even at -22°C outdoor temperature • Different heating system can be used. Like underfloor heating, radiators and others.* • Heating and DHW space saving in one hydraulic indoor unit. • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cooling operation is possible.* • Operating range is -25 to 35 °C. 	<ul style="list-style-type: none"> • 60°C hot water supply even at -20°C outdoor temperature • Different heating system can be used. Like underfloor heating, radiators and others.* • Heating and DHW space saving in one hydraulic indoor unit. • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cooling operation is possible.* • Operating range is -25 to 35 °C. 	<ul style="list-style-type: none"> • 55°C hot water supply even at -10°C outdoor temperature • Heating and DHW in one system.* • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cooling operation is possible.* • Operating range is -20 to 35 °C. • Different heating system can be used. Like underfloor heating, radiators and others.
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	Single Phase, 230 V/50 Hz	Single Phase, 230 V/50 Hz 3 Phase, 400 V/50 Hz	Single Phase, 230 V/50 Hz
Capacity	5 kW		WSHA050ML3 WOHA060KLT			WGHA050ML3 WOHA060KLT
	6 kW		WSHA080ML3 WOHA060KLT			WGHA080ML3 WOHA060KLT
	8 kW		WSHA080ML3 WOHA080KLT			WGHA080ML3 WOHA080KLT
	10 kW		WSHA100ML3 WOHA100KLT			WGHA100ML3 WOHA100KLT
	11 kW	WSHG140DG WOHG112LHT	WSHG140DG WOHK112LCTA		WGHG140DG WOHG112LHT	WGHG140DG WOHK112LCTA
	14 kW	WSHG140DG WOHG140LCTA	WSHG140DG WOHK140LCTA		WGHG140DG WOHG140LCTA	WGHG140DG WOHK140LCTA
	15 kW					
	16 kW	WSHG160DJ6 WOHG160LJL	WSHG140DG WOHK160LCTA		WGHG160DJ6 WOHG160LJL	WGHG140DG WOHK160LCTA
17 kW						

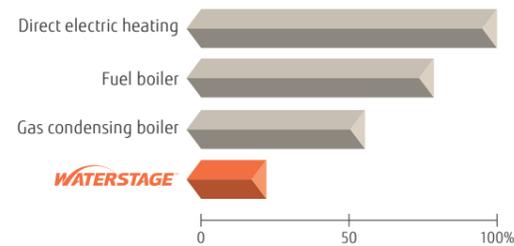
*Optional parts are required.

Benefits

Less CO₂ Emissions

This environmentally-friendly system substantially reduces CO₂ emissions compared to conventional gas and hydro carbons combustion.

Average annual CO₂ emissions

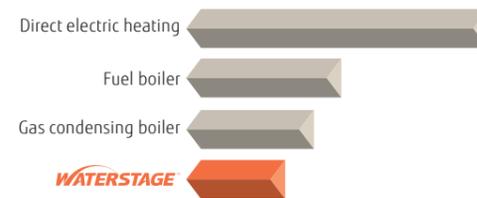


*Calculations based on data provided by European Program-2001¹ for EU 27
Fuel boiler efficiency: 89%, Gas boiler efficiency: 93%

Low Running Cost

Running cost is low and economical by high efficiency heat pump technology.

Average annual running cost



*The values may vary depending on installation, location, and operating conditions.

Clean and Healthy

Since burners are unnecessary, NO_x and other harmful substances are not generated.



Environmentally friendly heating system



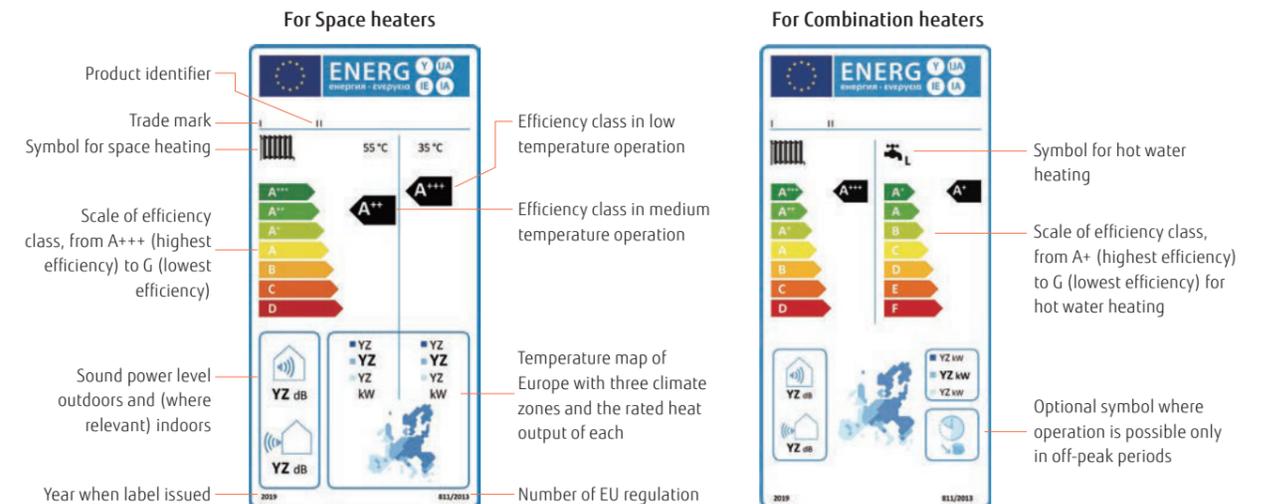
Easy Installation and Maintenance

All components are built into compact outdoor unit or hydraulic indoor unit.



Well structured Hydraulic indoor unit.
Sophisticated arrangement of hydraulic units, allows easy piping and maintenance

Energy Efficiency standard Product labels



The Ecodesign Directive Lot 1 Regulation 813/2013

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

From 26 September 2015, the Ecodesign Directive will apply to space heaters (including heat pumps and fossil fuel boilers), combination heaters (for both space and water heating), water heaters and water storage tanks.

All these products will have to meet minimum requirements for energy efficiency^{*1} and maximum sound power levels. The minimum energy efficiency level will be raised from 26 September 2017 and maximum sound power level will be lowered on 26 September 2018.

*1: Energy efficiency is represented by seasonal space heating efficiency (η_s). This value is based upon the seasonal coefficient of performance (SCOP).

The Energy Labelling Directive (EU) No. 811/213

The energy label aims to help consumers make direct comparisons of energy use, as well as product specific features. On all labels, product identifier, efficiency class, sound power levels and heat output must be displayed. For heat generators, the scale runs from A+++ to D. There are two different product labels for space heaters and combination heaters.

Seasonal space heating Energy efficiency class

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} have obtained the EHPA Quality Label^{*3} by tests according to 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: Only High Power 3 phase

*3: Check the validity of label at

www.ehpa.org/quality/quality-label/

SG-Ready Label



SG-Ready is a defined standard by BWP^{*4}, which makes it possible that the device can be integrated into a smart grid. Heat pumps, which

are equipped with the SG-Ready Label, can receive signals from the power grid (and e.g. also from PV systems) about the available (unused renewable) energy (from wind, sun & water). Fujitsu General provides the SG-Ready compatibility to all new Heat Pumps Series.

*4: BWP = the 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.

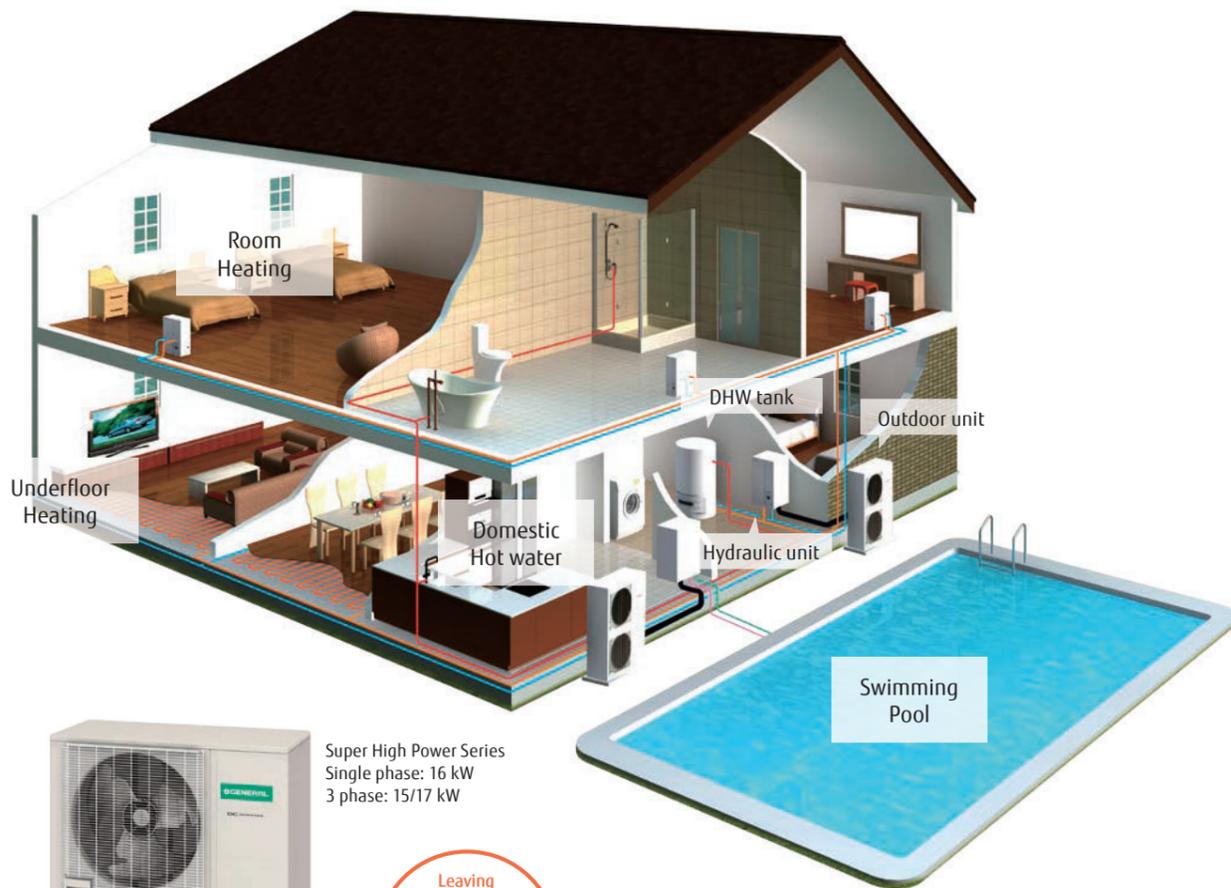
The Heat Pump KEYMARK is a voluntary, independent, European certification mark (ISO type 5 certification) for all heat pumps, combination heat pumps and hot water heaters (as covered by Ecodesign, EU Regulation 813/2013 and 814/2013). Fujitsu General's WATERSTAGE^{*5} has obtained the KEYMARK^{*6}.

*5: Only R32 comfort model

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

Home Heating & Domestic Hot Water

Wide range lineup suited for regional characteristics, family structure, and application. We provide various products to meet your needs from High Power via heating-centered series to reasonably-priced compact series.



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

Leaving water temperature
60°C

High leaving water temperature

High leaving water temperature 60°C maintained even at -20°C outdoor temperature without using backup heater.

* When using the Swimming pool kit (UTW-KSPXD), other devices (Radiator, DHW tank etc.) cannot be connected in the same system.

For Room heating & domestic hot water

Outdoor unit and hydraulic indoor unit can be installed freely, so installation is easy. Since hydraulic indoor unit is installed inside a house, freezing of circulated water can be prevented. A larger heating capacity can be performed flexibly by using more units in cascade connection.*1

*1: For High Power only



NEW



Adopting new refrigerant R32

R32 refrigerant is highly environmentally friendly for the reduction of the global warming potential than other refrigerant currently available on the market.



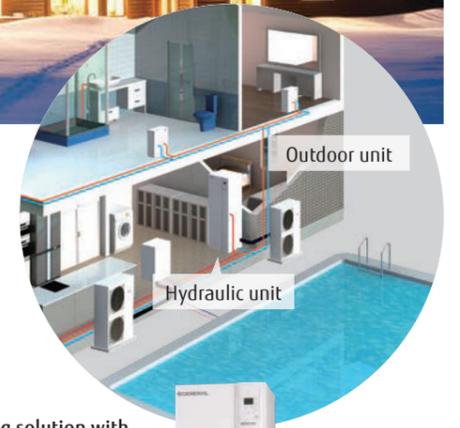
+ DHW Tank

DHW tank (option) can be used to supply hot water by connecting it to the system.

+ Boiler

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

*Optional parts necessary

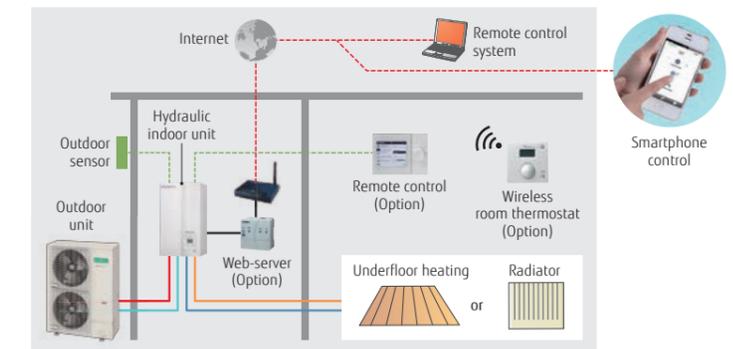


Stylish space saving solution with built-in DHW tank



Space is saved drastically due to built-in DHW tank.

Existing boiler can be replaced easily. Higher heating capacities can be achieved as there is the flexibility to use more units in a cascade type connection.



Smart control

User's needs are supported by offering a variety of controls, such as individual control and remote control options.

High Efficiency Technology

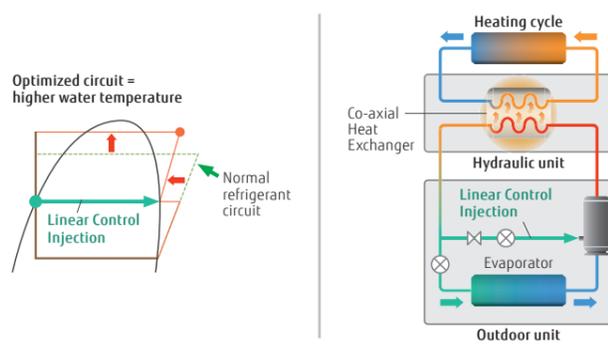
Twin Rotary Compressor



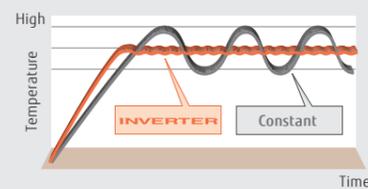
For Outdoor Unit

Twin Rotary Compressor Injection Port

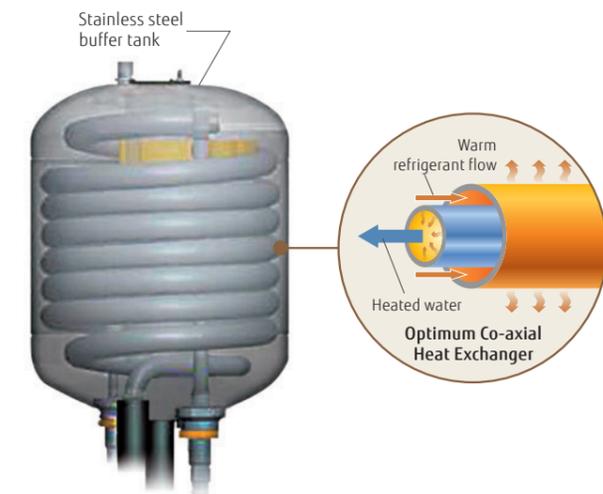
The compressor achieves high condensing temperature without overheating the discharge gas temperature by Linear Control Injection process during compression. Therefore, the condensing temperature rises up higher than normal circuit. A higher hot water temperature is achieved by controlling the injection amount according to the usage state.



Accurate temperature control by DC inverter technology



High Durability Co-axial Heat Exchanger



For Hydraulic Indoor Unit

Stainless steel buffer tank

Heat exchange amount is 25% higher than previous model. Energy saving performance is improved.

- Corrosion protected
- No flow switch necessary
- Anti-freeze-protection is unnecessary

Class A Pump

Energy saving pump with constant volume or pressure adjustment function.



Split Type

Comfort Series



High Leaving Water Temperature

Maximum leaving water temperature is 55°C without backup heater. Hot supply temperature can be maintained even at -10°C outdoor temperature.

* If you want to raise the hot water supply temperature, backup heater can be used for the auxiliary operation.



High COP

Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.

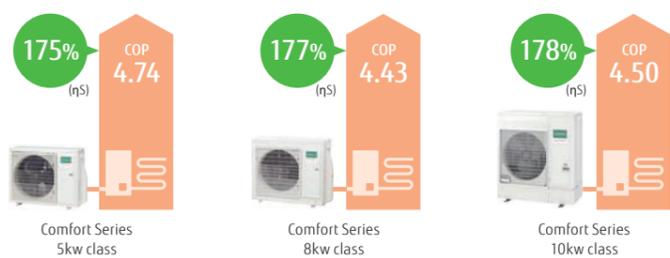
Energy efficiency class



*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (ηs)

Condition : 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 efficient DC twin rotary compressor

DC Inverter
Smooth water temperature control realized by DC inverter control.

Hydraulic indoor unit:
WSHA050ML3 / WSHA080ML3 /
NEW WSHA100ML3
Outdoor unit:
WOHA060KLT / WOHA080KLT /
NEW WOHA100KLT



Specifications

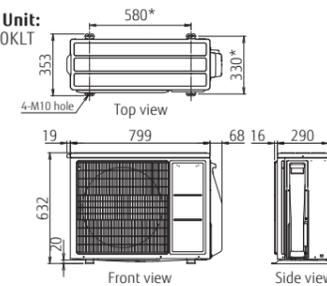
Model Name	Hydraulic indoor unit		WSHA050ML3		WSHA080ML3		WSHA080ML3		WSHA100ML3			
	Outdoor unit		WOHA060KLT		WOHA060KLT		WOHA080KLT		WOHA100KLT			
Capacity range			5		6		8		10			
7°C/35°C floor heating *1	Heating capacity	kW	4.50		5.50		7.50		9.50			
	Input power		0.949		1.18		1.69		2.11			
	COP		4.74		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			°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 _{nom})			kW	5	5	5	6	7	8	9	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			dB(A)	Hydraulic indoor unit		-		40		-		
				Outdoor unit		57		-		62		
Hydraulic indoor unit Specification												
Power source			Single phase 230 V 50 Hz									
Dimensions H×W×D			mm	847 × 450 × 493		847 × 450 × 493		847 × 450 × 493		847 × 450 × 493		
Weight (Net)			kg	47		47		47		47		
Water circulation			Min./Max.	L/min		7.6/22.0		8.5/22.0		10.0/22.0		
Buffer tank capacity			L	16		16		16		16		
Expansion vessel capacity			L	8		8		8		8		
Leaving water temperature range			Max.	°C		55		55		55		
Water pipe connection diameter			Flow/Return	mm		Ø 25.4/Ø 25.4		Ø 25.4/Ø 25.4		Ø 25.4/Ø 25.4		
Backup heater			Capacity	kW		3.0		3.0		3.0		
Outdoor unit specification												
Power source			Single phase 230 V 50 Hz									
Current			Max.	A		13.0		18.0		19.0		
Dimensions H × W × D			mm	632 × 799 × 290		632 × 799 × 290		716 × 820 × 315		998 × 940 × 320		
Weight (Net)			kg	39		39		42		62		
Refrigerant			Type (Global Warming Potential)	R32(675)		R32(675)		R32(675)		R32(675)		
Additional refrigerant charge amount			Charge	kg		0.97		1.02		1.63		
				g/m		25		25		20		
Connection pipe			Length/Pre-charge	Diameter	Liquid	mm		6.35		6.35		
					Gas	mm		12.70		12.70		
				Height difference	Length		m		3/30		3/30	
					Height difference		m		15		15	
Operating range			Heating	°C		-20 to 35		-20 to 35		-20 to 35		

*1: The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
 *2: All information of ErP can be available for downloaded from www.fujitsu-general.com/global/support/downloads/search/
 *3: The values of sound power level are based on measurement of EN12102 standard under conditions of EN14825 standard.

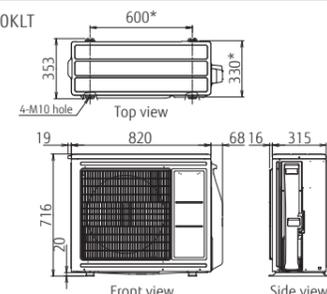
Dimensions

(Unit:mm)

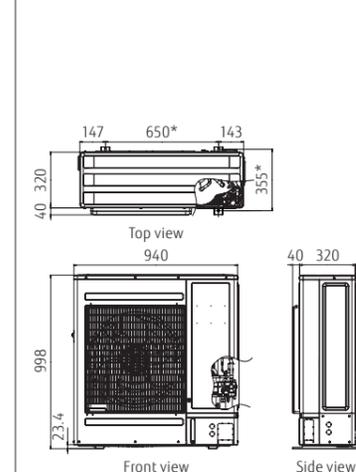
Outdoor Unit: WOHA060KLT



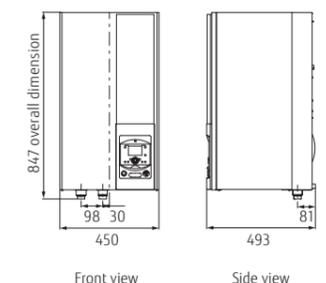
WOHA080KLT



WOHA100KLT



Hydraulic Indoor Unit: WSHA050ML3/WSHA080ML3/WSHA100ML3



*Pitch of bolts for installation

Split Type

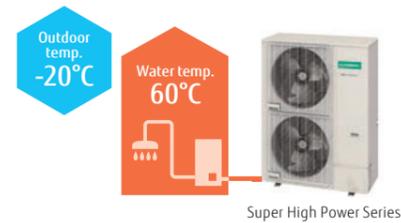
Super High Power Series



High Leaving Water Temperature

High leaving water temperature of 60°C is kept even when outdoor temperature is down to -20°C without using backup heaters. And it's possible to supply 55°C at -22°C outdoor temperature without backup heater.

* If you want to raise the hot water supply temperature, backup heater can be used for the auxiliary operation.



High COP

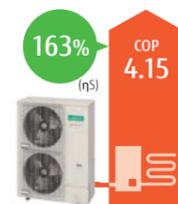
Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.

Energy efficiency class



Seasonal space heating energy efficiency (η_s)

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



Single phase
16kW class

Extended Operating Range down to -25°C

Improved operating range down to -25°C outdoor temperature



Hydraulic indoor unit:
WSHG160DJ6
Outdoor unit:
WOHG160LJL



Specifications

Model Name	Hydraulic indoor unit	Outdoor unit	WSHG160DJ6	WOHG160LJL
Capacity range			16	
7°C/35°C floor heating *1	Heating capacity	kW	16.00	
	Input power		3.86	
	COP		4.15	
2°C/35°C floor heating *1	Heating capacity	kW	13.30	
	Input power		4.25	
	COP		3.13	
-7°C/35°C floor heating*1	Heating capacity	kW	14.50	
	Input power		5.27	
	COP		2.75	
Space heating characteristics*2				
Temperature application	°C		55	35
Energy efficiency class			A++	A++
Rated heat output (P _{rated})	kW		14	16
Seasonal space heating energy efficiency (η _s)	%		125	163
Annual energy consumption	kWh		8,757	8,014
Sound power level	Hydraulic indoor unit	dB(A)	45	45
	Outdoor unit		67	66
Hydraulic indoor unit Specification				
Power source			Single phase, 230 V 50 Hz	
Dimensions H×W×D	mm		805 × 450 × 471	
Weight (Net)	kg		52.5	
Water circulation	Min./Max.	L/min	26.4/57.8	
Buffer tank capacity	L		22	
Expansion vessel capacity	L		10	
Leaving water temperature range	Max.	°C	60	
Water pipe connection diameter	Flow/Return	mm	Ø 25.4/Ø 25.4	
Backup heater	Capacity	kW	6.0(3.0kW×2pcs.)	
Outdoor unit specification				
Power source			Single phase, 230 V 50 Hz	
Current	Max.	A	28.0	
Dimensions H × W × D	mm		1,428 × 1,080 × 480	
Weight (Net)	kg		137	
Refrigerant	Type (Global Warming Potential)		R410A (2,088)	
	Charge	kg	3.80	
Additional refrigerant charge amount		g/m	50	
Connection pipe	Diameter	Liquid	mm	Ø 9.52
		Gas		Ø 15.88
	Length	Min./Max.	m	5/30
Length(Pre-charge)		m	15	
	Height difference	Max.	m	25/15 (Outdoor unit:Upper/Lower)
Operating range	Heating	°C	-25 to 35	

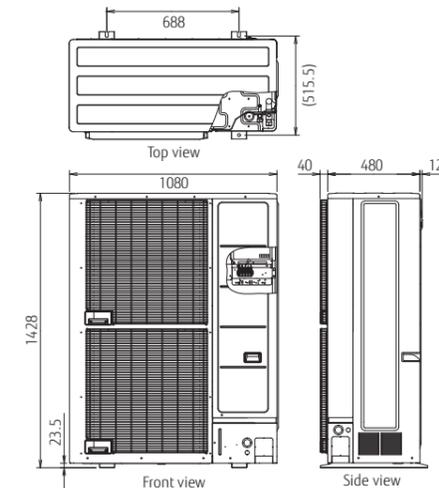
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.

*2:All information of ErP can be available for downloaded from www.fujitsu-general.com/global/support/downloads/search/

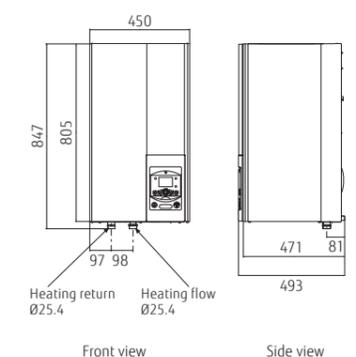
Dimensions

(Unit:mm)

Outdoor Unit:
Single phase: WOHG160LJL



Hydraulic Indoor Unit:
Single phase : WSHG160DJ6



Split Type High Power Series



High Leaving Water Temperature

High leaving water temperature of 60°C is kept even when outdoor temperature is down to -20°C without using backup heaters.

* If you want to raise the hot water supply temperature, backup heater can be used for the auxiliary operation.



High COP

Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.

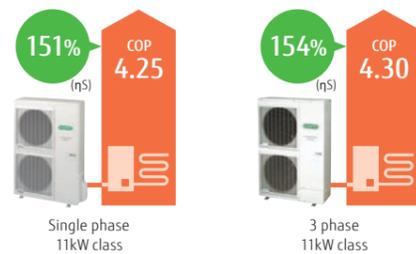
Energy efficiency class



*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (η_s)

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



Hydraulic indoor unit:
WSHG140DG
Outdoor unit:
WOHG112LHT / WOHG140LCTA
[3 phase] WOHK112LCTA / WOHK140LCTA / WOHK160LCTA



Specifications

Model Name	Hydraulic indoor unit	WSHG140DG	WSHG140DG	WSHG140DG	WSHG140DG	WSHG140DG
Capacity range	Outdoor unit	WOHG112LHT	WOHG140LCTA	WOHK112LCTA	WOHK140LCTA	WOHK160LCTA
7°C/35°C floor heating *1	Heating capacity	11	14	11	14	16
	Input power	10.80	13.50	10.80	13.50	15.17
	COP	2.54	3.23	2.51	3.20	3.70
2°C/35°C floor heating *1	Heating capacity	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	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 indoor unit	46									
	Outdoor unit	68									

Hydraulic indoor unit Specification

Power source	Single phase, 230 V 50 Hz		3 phase, 400 V 50 Hz	
Dimensions H×W×D	mm		800 × 450 × 457	
Weight (Net)	kg		42	
Water circulation	Min./Max.	L/min	19.5/39.0	24.4/48.7
Buffer tank capacity	L		16	
Expansion vessel capacity	L		8	
Leaving water temperature range	Max.	°C	60	
Water pipe connection diameter	Flow/Return	mm	Ø 25.4/Ø 25.4	
Backup heater	Capacity	kW	6.0(3.0kW×2pcs.)	

Outdoor unit specification

Power source	Single phase, 230 V 50 Hz		3 phase, 400 V 50 Hz	
Current	Max.	A	22.0	25.0
Dimensions H × W × D	mm		1,290 × 900 × 330	
Weight (Net)	kg		92	
Refrigerant	Type (Global Warming Potential)	R410A (2,088)		
	Charge	kg	2.50	
Additional refrigerant charge amount		g/m	50	
	Diameter	Liquid	Ø 9.52	
Connection pipe	Gas	mm	Ø 15.88	
	Length	Min./Max.	5/20	
	Length(Pre-charge)	m	15	
	Height difference	Max.	15	
Operating range	Heating	°C	-25 to 35	

*1: The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.

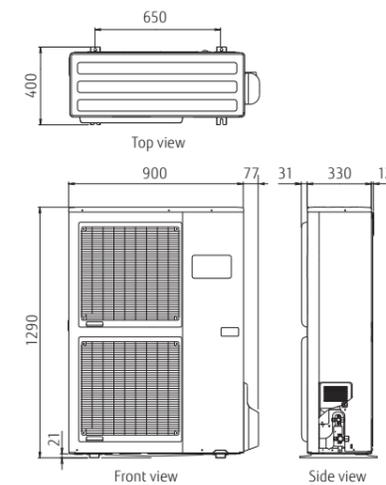
*2: All information of ErP can be available for downloaded from www.fujitsu-general.com/global/support/downloads/search/

Dimensions

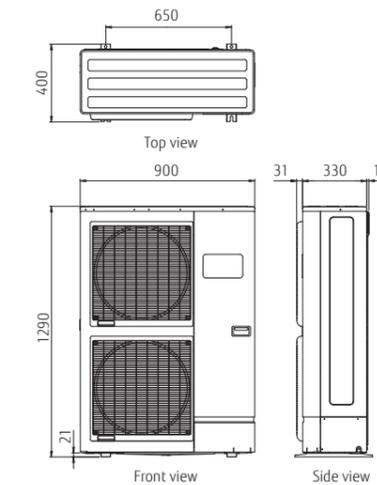
(Unit:mm)

Outdoor Unit:

Single phase: WOHG112LHT/WOHG140LCTA

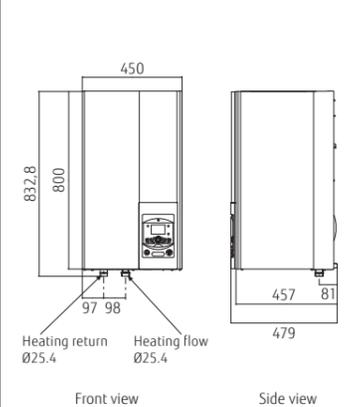


3 phase: WOHK112LCTA/WOHK140LCTA/WOHK160LCTA



Hydraulic Indoor Unit:

WSHG140DG



Split DHW Integrated Type

Comfort Series



High Leaving Water Temperature

Maximum leaving water temperature is 55°C without backup heater. Hot water supply temperature can be maintained even at -10°C outdoor temperature.

* If you want to raise the hot water supply temperature, backup heater can be used for the auxiliary operation.



High COP

Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.

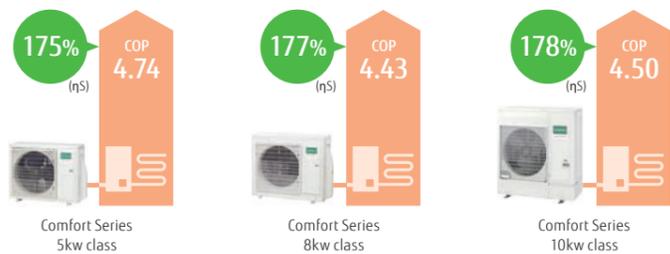
Energy efficiency class



*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (η_s)

Condition : 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 efficient DC twin rotary compressor

DC Inverter
Smooth water temperature control realized by DC inverter control.

Hydraulic indoor unit:
WGHA050ML3 / WGHA080ML3 /
NEW WGHA100ML3
Outdoor unit:
WOHA060KLT / WOHA080KLT /
NEW WOHA100KLT



Specifications

Model Name	Hydraulic indoor unit Outdoor unit	WGHA050ML3 WOHA060KLT	WGHA080ML3 WOHA080KLT	WGHA080ML3 WOHA080KLT	WGHA100ML3 WOHA100KLT
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					
Temperature application	°C	55	35	55	35
Energy efficiency class		A++	A+++	A++	A+++
Rated heat output (P _{rated})	kW	5	5	6	7
Seasonal space heating energy efficiency (η _s)	%	125	175	125	177
Annual energy consumption	kWh	3,035	2,322	3,411	2,594
Sound power level*3	Hydraulic indoor unit	40	-	40	-
	Outdoor unit	57	-	57	-
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 indoor unit Specification					
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
Leaving water temperature range	Max. °C	55	55	55	55
Water pipe connection diameter	Flow/Return mm	Ø 25.4/Ø 25.4	Ø 25.4/Ø 25.4	Ø 25.4/Ø 25.4	Ø 25.4/Ø 25.4
Hot water pipe connection diameter	mm	Ø 19.05	Ø 19.05	Ø 19.05	Ø 19.05
Backup heater	Capacity kW	3.0	3.0	3.0	3.0
Outdoor unit specification					
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)			
	Charge	0.97	0.97	1.02	1.63
Additional refrigerant charge amount		25	25	25	20
	g/m	6.35	6.35	6.35	9.52
Connection pipe	Diameter	mm			
	Length	m			
	Length (Pre-charge)	m			
	Height difference	m			
Operating range	Heating	°C			
		-20 to 35			

*1: The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.

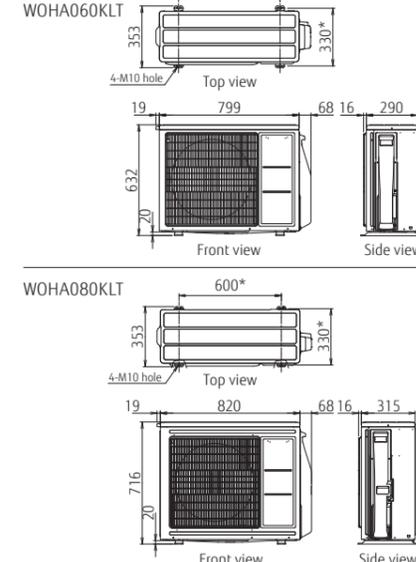
*2: All information of ErP can be available for downloaded from www.fujitsu-general.com/global/support/downloads/search/

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

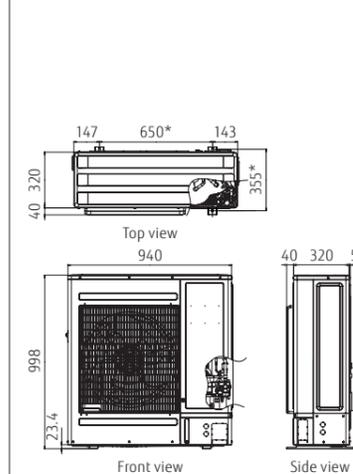
Dimensions

(Unit:mm)

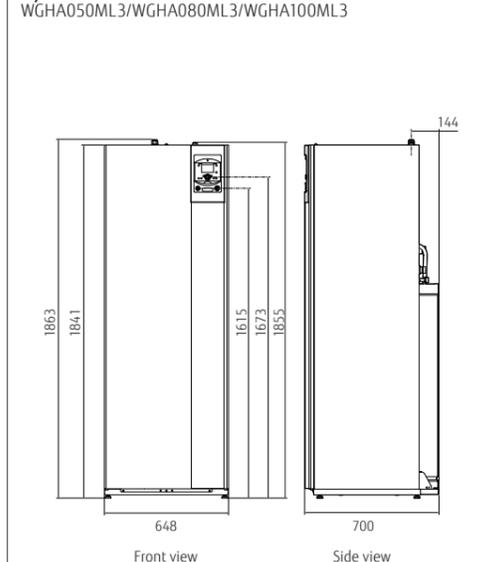
Outdoor Unit:



WOHA100KLT



Hydraulic Indoor Unit: WGHA050ML3/WGHA080ML3/WGHA100ML3



*Pitch of bolts for installation

Split DHW Integrated Type

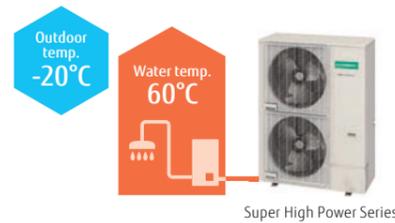
Super High Power Series



High Leaving Water Temperature

High leaving water temperature of 60°C is kept even when outdoor temperature is down to -20°C without using backup heaters. And it's possible to supply 55°C at -22°C outdoor temperature without backup heater.

* If you want to raise the hot water supply temperature, backup heater can be used for the auxiliary operation.



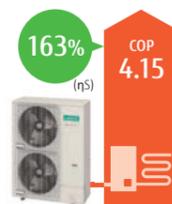
High COP

Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.



Seasonal space heating energy efficiency (η_s)

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



Single phase 16kW class

Extended Operating Range down to -25°C

Improved operating range down to -25°C outdoor temperature

Stylish space saving solution with **Built in High Performance DHW Tank 190 L**

- DHW Production with coil heat exchanger to optimise the DHW performance
- Quick temperature rise due to a big exchanger surface

Hydraulic indoor unit:
WGHG160DJ6
 Outdoor unit:
WOHG160LJL



Hydraulic indoor unit
Single phase/



Outdoor unit
Single phase 16kW

Specifications

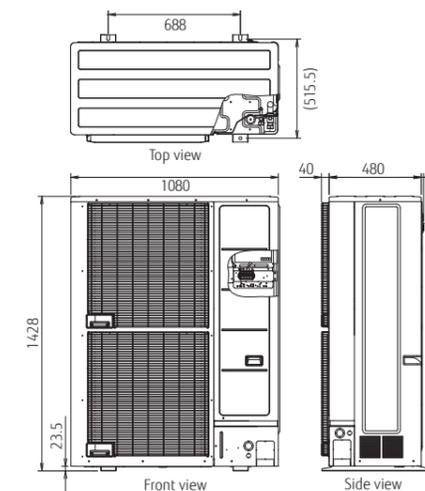
Model Name	Hydraulic indoor unit	WGHG160DJ6	WOHG160LJL
Capacity range			
7°C/35°C floor heating *1	Heating capacity	16.00	
	Input power	3.86	
	COP	4.15	
2°C/35°C floor heating *1	Heating capacity	13.30	
	Input power	4.25	
	COP	3.13	
-7°C/35°C floor heating*1	Heating capacity	14.50	
	Input power	5.27	
	COP	2.75	
Space heating characteristics*2			
Temperature application	°C	55	35
Energy efficiency class		A++	A++
Rated heat output (P _{rated})	kW	14	16
Seasonal space heating energy efficiency (η _s)	%	125	163
Annual energy consumption	kWh	8,757	8,014
Sound power level	Hydraulic indoor unit	45	45
	Outdoor unit	67	66
Domestic hot water characteristics*2			
Load profile		L	
Energy efficiency class		A	
Energy efficiency (η _{wh})	%	109	
Annual electricity consumption	kWh	941	
Hydraulic indoor unit Specification			
Power source		Single phase, 230 V 50 Hz	
Dimensions H×W×D	mm	1,841 × 648 × 698	
Weight (Net)	kg	166	
Water circulation	Min./Max.	L/min	
		26.4/57.8	
DHW capacity	L	190	
Hot water heater capacity	kW	1.5	
Buffer tank capacity	L	22	
Expansion vessel capacity	L	12	
Leaving water temperature range	Max.	°C	
		60	
Water pipe connection diameter	Flow/Return	mm	
		Ø 25.4/Ø 25.4	
Hot water pipe connection diameter		mm	
		Ø 19.05	
Backup heater	Capacity	kW	
		6.0(3.0kW×2pcs.)	
Outdoor unit specification			
Power source		Single phase, 230 V 50 Hz	
Current	Max.	A	
		28.0	
Dimensions H × W × D		mm	
		1,428 × 1,080 × 480	
Weight (Net)		kg	
		137	
Refrigerant	Type (Global Warming Potential)	R410A (2,088)	
	Charge	kg	
		3.80	
Additional refrigerant charge amount		g/m	
		50	
Connection pipe	Diameter	Liquid	mm
		Gas	mm
	Length	Min./Max.	m
			Ø 9.52 / Ø 15.88
	Length(Pre-charge)		m
			5/30
	Height difference	Max.	m
			15
Operating range	Heating	°C	
		25/15 (Outdoor unit:Upper/Lower)	
		-25 to 35	

*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
 *2:All information of ErP can be available for downloaded from www.fujitsu-general.com/global/support/downloads/search/

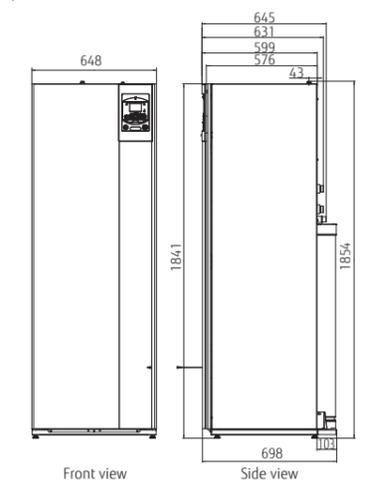
Dimensions

(Unit:mm)

Outdoor Unit:
 Single phase: WOHG160LJL

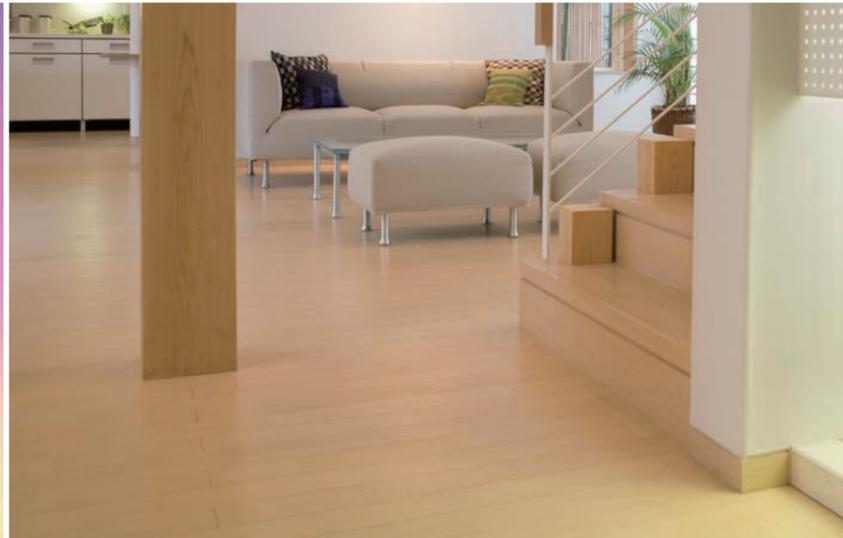


Hydraulic Indoor Unit:
 Single phase: WGHG160DJ6



Split DHW Integrated Type

High Power Series



High Leaving Water Temperature

High leaving water temperature of 60°C is kept even when outdoor temperature is down to -20°C without using backup heaters.

* If you want to raise the hot water supply temperature, backup heater can be used for the auxiliary operation.



High COP

Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.



*Temperature application : Heating Temp. 35°C.

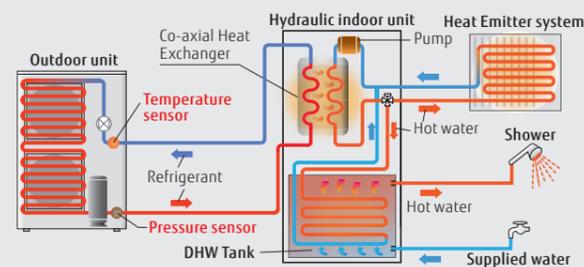
Seasonal space heating energy efficiency (η_s)

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



Optimization of refrigerant cycle operation

High Power model achieves a high performance and efficiency by adopting twin sensors and control technology corresponding to hot water heating.



Hydraulic indoor unit:
WGHG140DG
Outdoor unit:
WOHG112LHT / WOHG140LCTA
[3 phase] WOHK112LCTA / WOHK140LCTA / WOHK160LCTA



Specifications

Model Name	Hydraulic indoor unit		WGHG140DG		WGHG140DG		WGHG140DG		WGHG140DG	
	Outdoor unit		WOHG112LHT	WOHG140LCTA	WOHK112LCTA	WOHK140LCTA	WOHK140LCTA	WOHK160LCTA		
Capacity range			11	14	11	14	14	16		
7°C/35°C floor heating *1	Heating capacity	kW	10.80	13.50	10.80	13.50	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	15.50		
	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	15.50		
	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		°C		55	35	55	35	55	35	55	35
Temperature application											
Energy efficiency class				A+	A++	A+	A+	A+	A++	A+	A+
Rated heat output (P _{rated})				9	11	11	13	9	11	11	13
Seasonal space heating energy efficiency (η _s)				112	151	113	148	112	154	117	150
Annual energy consumption				6,704	6,062	8,041	6,824	6,669	5,930	7,803	6,738
Sound power level	Hydraulic indoor unit			46	46	46	46	46	46	46	46
	Outdoor unit			68	69	69	68	70	68	71	71

Domestic hot water characteristics*2				L	
Load profile					
Energy efficiency class					A
Energy efficiency (η _{wh})					88
Annual electricity consumption					1166

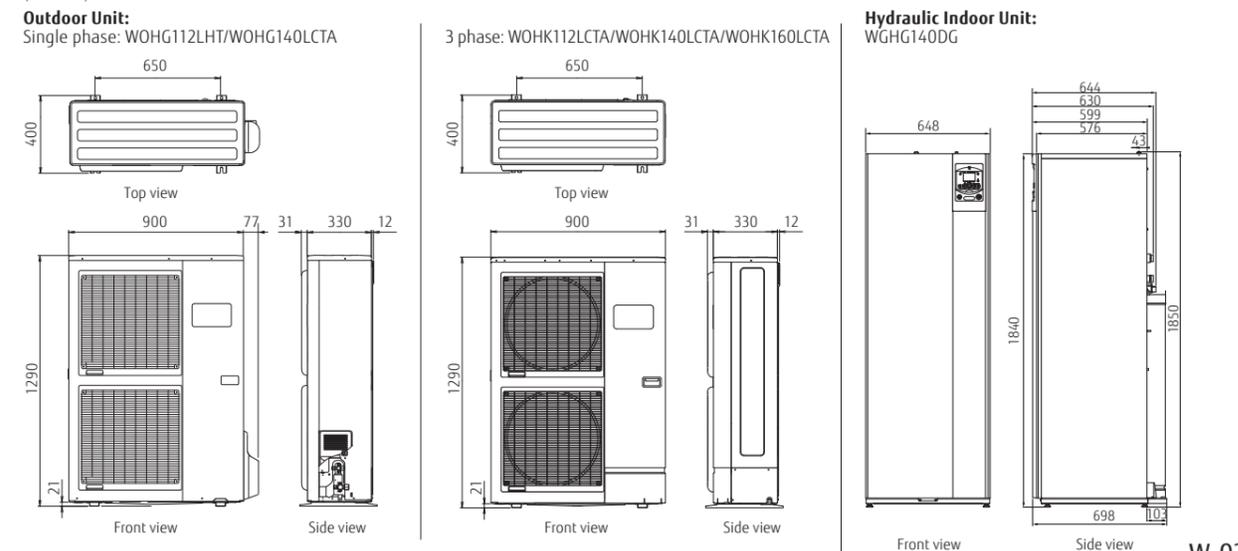
Hydraulic indoor unit Specification		Single phase 230 V 50 Hz		3 phase, 400 V 50 Hz	
Power source					
Dimensions H×W×D	mm	1,840 × 648 × 698			
Weight (Net)	kg	152			
Water circulation	Min./Max. L/min	19.5/39.0	24.4/28.7	19.5/39.0	24.4/48.7
DHW capacity	L	190			
Hot water heater capacity	kW	1.5			
Buffer tank capacity	L	16			
Expansion vessel capacity	L	12			
Leaving water temperature range	Max. °C	60			
Water pipe connection diameter	Flow/Return mm	Ø 25.4/Ø 25.4			
Hot water pipe connection diameter	mm	Ø 19.05			
Backup heater	Capacity kW	6.0(3.0kW×2pcs.)		9.0(3.0kW×3pcs.)	

Outdoor unit specification		Single phase 230 V 50 Hz		3 phase, 400 V 50 Hz	
Power source					
Current	Max. A	22.0	25.0	9.0	10.5
Dimensions H × W × D	mm	1,290 × 900 × 330			
Weight (Net)	kg	92		99	
Refrigerant	Type (Global Warming Potential)	R410A (2,088)			
Additional refrigerant charge amount	Charge	kg		2.50	
		g/m		50	
Connection pipe	Diameter	Liquid	mm	Ø 9.52	
		Gas	mm	Ø 15.88	
	Length	Min./Max.	m	5/20	
	Length(Pre-charge)		m	15	
Height difference	Max.	m	15		
		°C	-25 to 35		

*1: The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
 *2: All information of ErP can be available for downloaded from www.fujitsu-general.com/global/support/downloads/search/

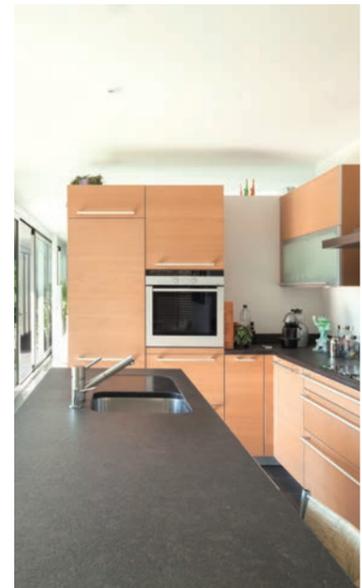
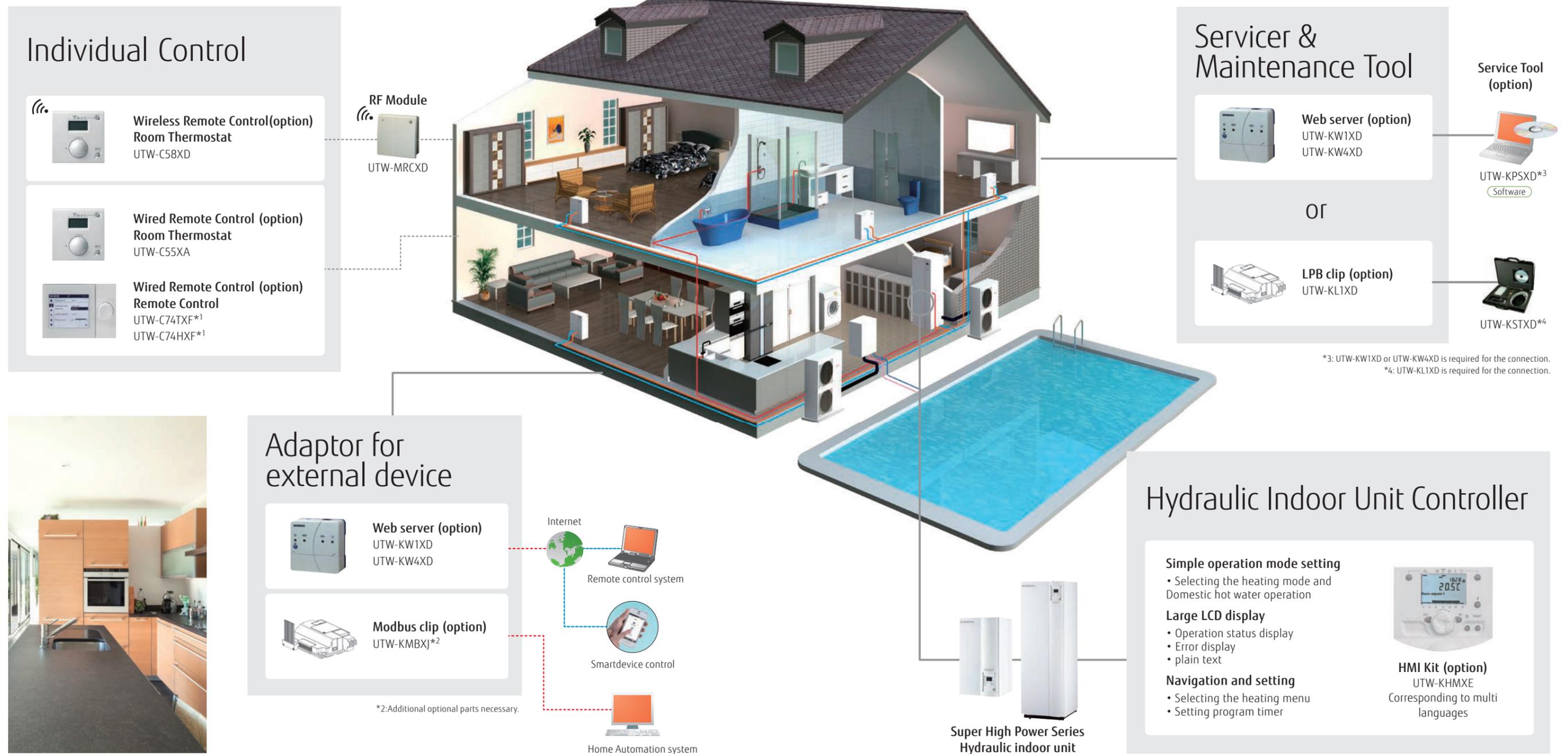
Dimensions

(Unit:mm)



Control Overview

User's needs are supported by offering a variety of controls, such as individual control and remote control options.



Comfort Control

The high grade heating controller adjusts the flow temperature automatically depending on the weather conditions, so that the room ambient temperature and the domestic hot water temperature are maintained at the desired levels.

Hydraulic Indoor Unit Controller

4 Heating mode

1. Automatic mode

Comfort/Reduce mode switching automatically according to time program

2. Reduce mode

Constant reduce temperature

3. Comfort mode

Constant comfort temperature

4. Protection mode

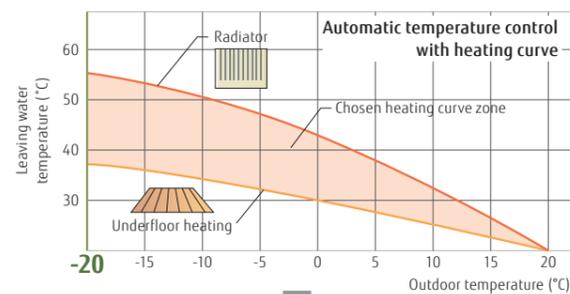
Stand-by mode with anti-frost protection



Useful Function

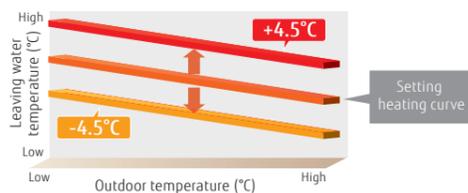
Automatic heating curve control

Automatic temperature regulation in accordance with heating curve (Depends on heating terminal and outdoor temperature)



Heating curve off-set: Adjust setting room temp.

This can be fine adjusted when too warm or too cold.



Quick recovery from defrost operation

Maintains the room temperature during defrost operation by boost start operation.

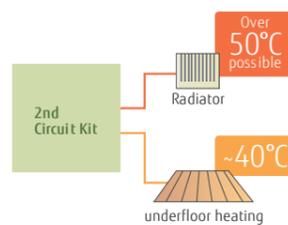
Auto-changeover

If the cooling operation function is set, the system can automatically switch to cooling or heating, depending on the outdoor temperature to provide all-season comfortable air conditioning.

2 Zone individual control

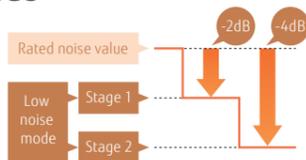
2 Zone individual control (2 underfloor heating zones or underfloor heating + radiator zone, etc.)^{*1}

^{*1}: Optional parts are required.



2 Stage low noise mode

Outdoor unit can be switched to silent mode, depending on the installation environment.
^{*1}Valid only for High Power



Backup heater operation

Backup heater can operate at low outdoor temperature so that comfortable status can be maintained. The backup heater is controlled intelligently just as a security backup for very cold days/nights and only activated when really necessary.

Energy Saving

Programmable timer

- The setting of timer operation can easily be adjusted.
- Changing the heating mode linked with time is possible.

Day-Weekly timer setting

- The day-weekly timer can be set up for up to 3 times per day.
- Allows separate settings for each day of the week.

Holiday timer setting

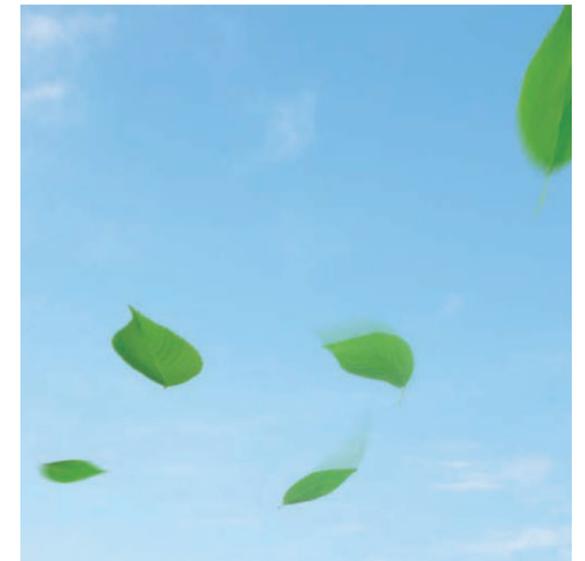
- The holiday timer can be set up for up to 8 periods
- If you are absent for a long time in the winter, freezing of room can be prevented.

Peak Cut Function^{*2}

This function performs operation by setting a peak current value and reducing the power consumption.

Mode	The ratio of suppressing the power consumption
1	100%
2	75%
3	50%
4	Almost 0%

^{*2}: Optional parts are required.



Safety Function

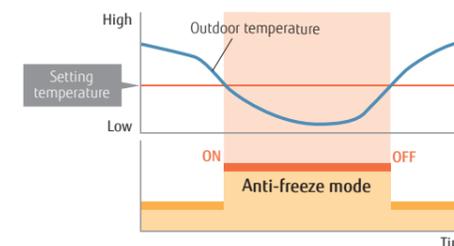
Anti-legionella function

The growth of Legionella in DHW tank is suppressed and safe and clean hot water is supplied at all times.



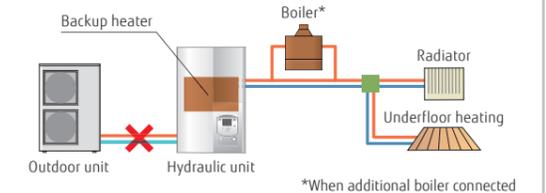
Anti-freeze function

Water circulation and compressor can be automatically achieved at low outdoor temperature. Freezing of circulated water can be prevented.



Emergency operation

System can continuously supply hot water by built in back up heater or boiler, as emergency, even if an error is occurred.



Error/Maintenance alarm

Quick error handling service and maintenance are possible by this function.

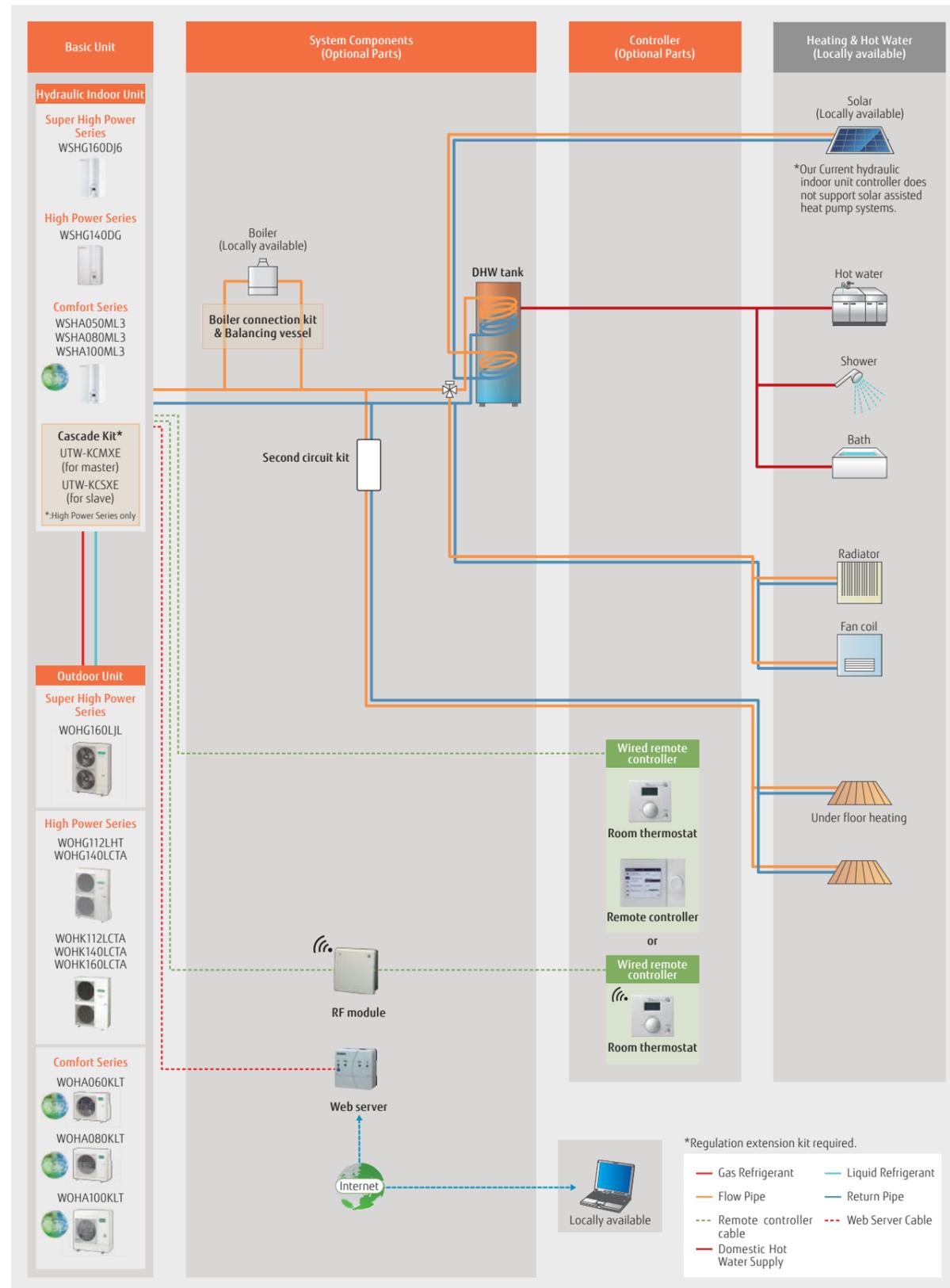


- Error history saves 10 errors in memory
- Display telephone No. of service company

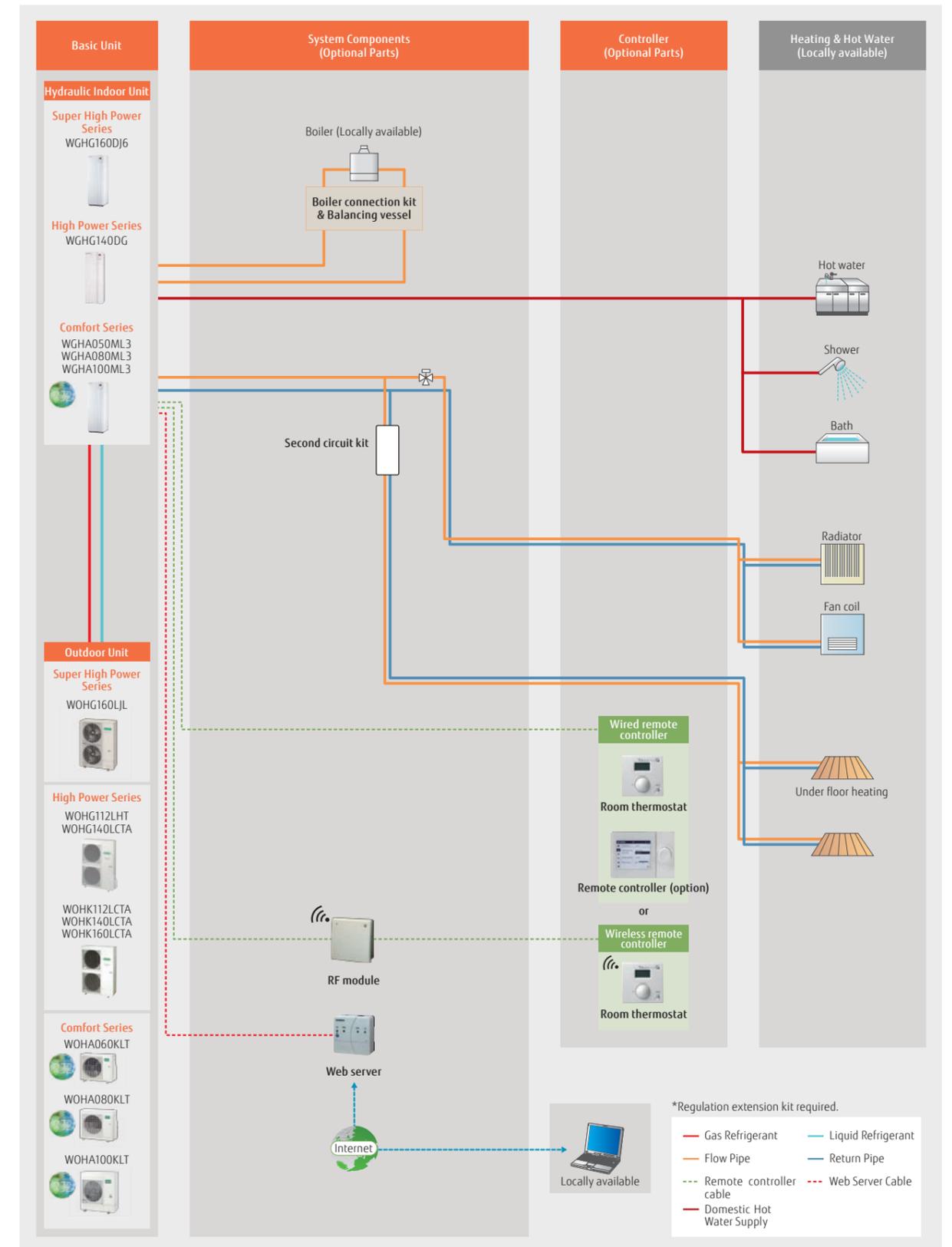


System Configuration

Split Type



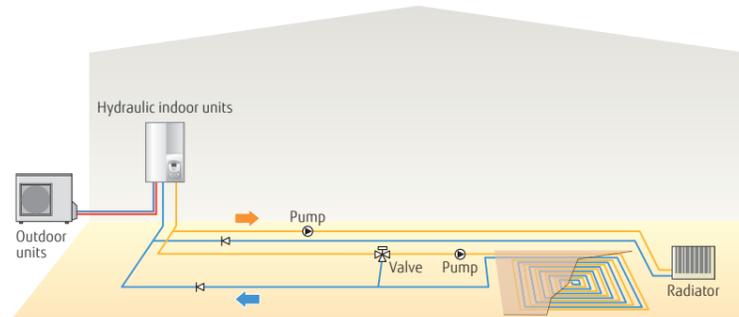
Split DHW Integrated Type



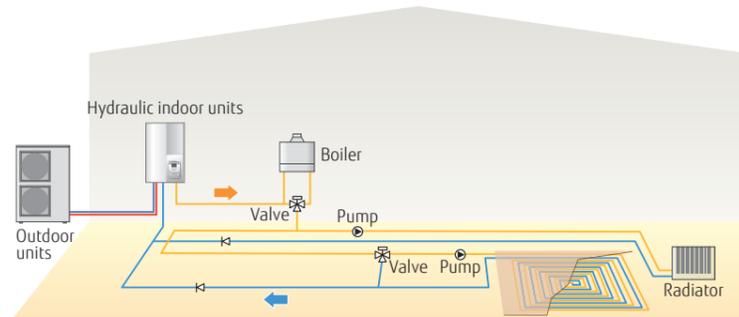
Case Studies

Split Type

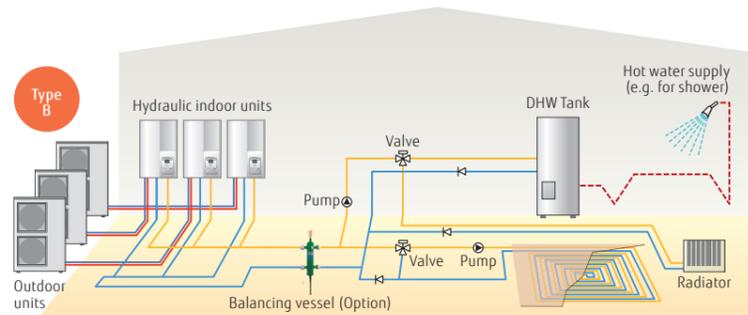
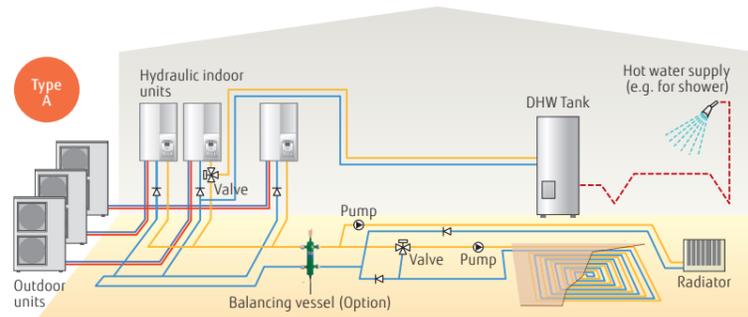
**2 emitter simultaneous heating
(Individual control)**
Underfloor heating + Radiator



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



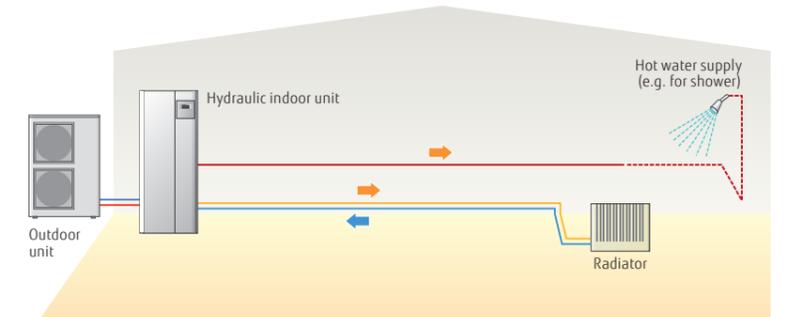
**2 emitter simultaneous heating &
Domestic Hot Water (Cascade)**



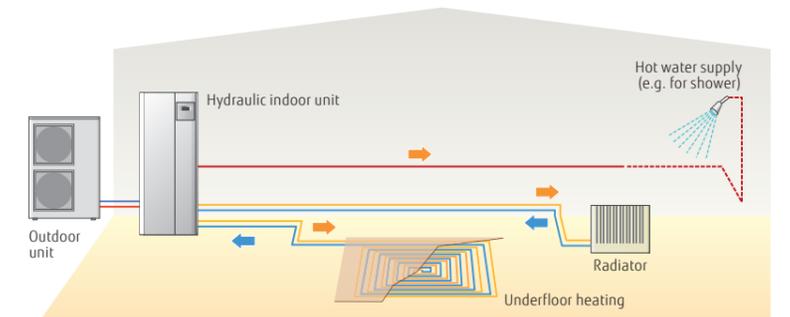
The hydraulic layouts shown are mainly representation. Please check with local dealer for actual hydraulic connections.

Split DHW Integrated Type

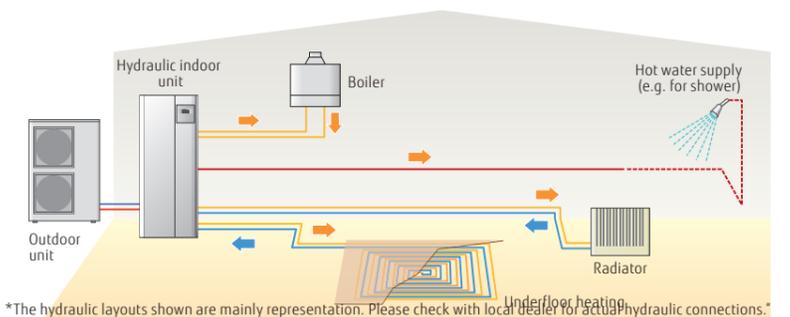
Single heating & Domestic Hot Water
Radiator + Domestic Hot Water



**2 emitter simultaneous heating
(Individual control) & Domestic Hot Water**
Radiator + Domestic Hot Water



**Boiler connected to heating (Boiler + Heating)
& Domestic Hot Water**

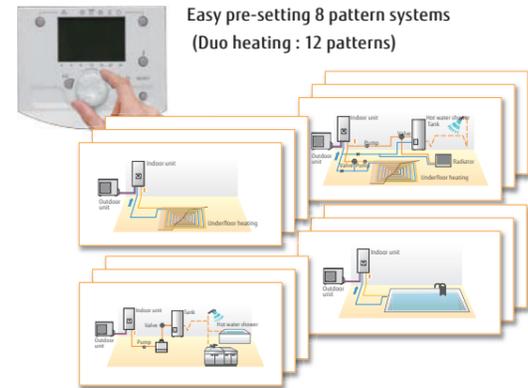


The hydraulic layouts shown are mainly representation. Please check with local dealer for actual hydraulic connections.

Simplified installation

Pre-setting configurations

When installed, the controller makes it simple to set system settings without having to individually set the system's components and units.

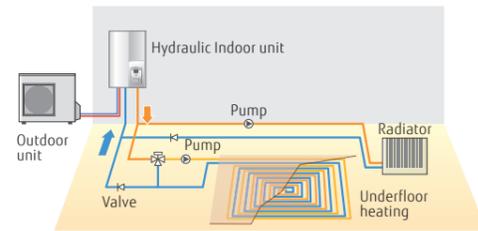


Configuration (Parameter 5700)	Type of installation
Pre setting 1	1 heating circuit
Pre setting 2	2 heating circuit
Pre setting 3	1 heating circuit & boiler backup
Pre setting 4	2 heating circuit & boiler backup
Pre setting 5	1/2 heating circuit & buffer control
Pre setting 6	1/2 heating circuit & buffer control & boiler backup
Pre setting 7	cascade connection Master
Pre setting 8	cascade connection A
Pre setting 9	cascade connection B/C

- DHW & solar control auto detection
- pool heating & cooling optional

Outdoor temperature simulation

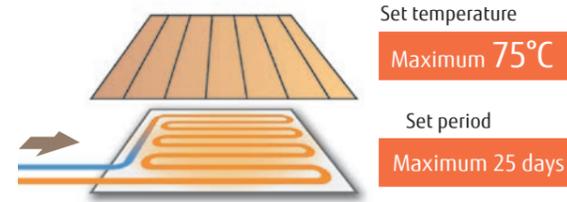
It can be checked whether each unit operates correctly under the set conditions and expected outdoor temperatures when the system is actually assembled.



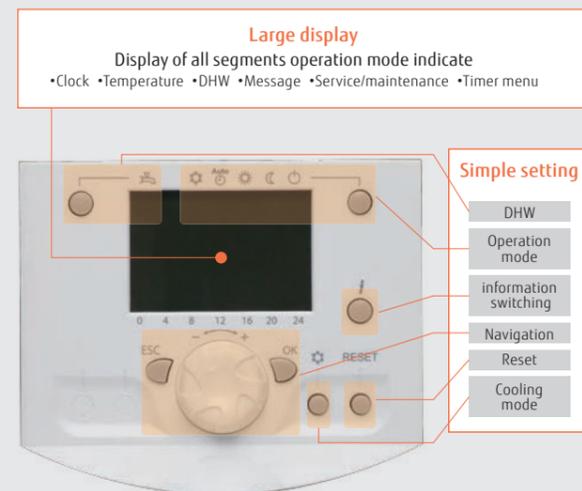
Outdoor temperatures in the range from -50°C to +50°C can be simulated.

Concrete Floor drying

When underfloor heating is installed, it can be used to dry the concrete surrounding the hot water piping more quickly to shorten the construction period.



Controller features a large LCD display and buttons to make setting functions easy



Main operation flow and setting contents for installers and end users

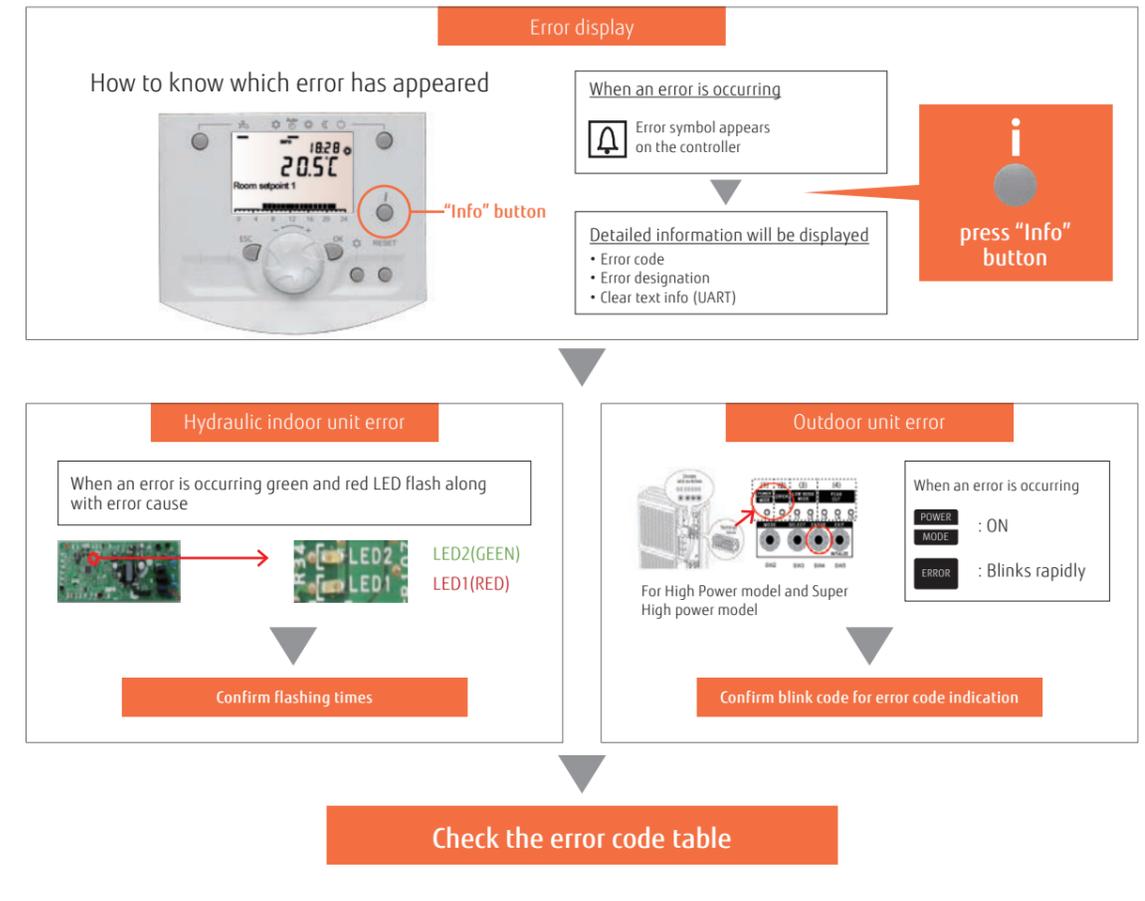
	Flow Chart	Example Item
Installers	1 Install Setting	Pump speed setting, Configuration, Heating curve setting, Heat pump shut off
	2 Option Setting	Cooling kit, DHW kit, Boiler kit, Swimming pool kit
	3 Convenient Function	Automatic Heating curve setting, Underfloor controlled driving, Outdoor temperature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

Easy Installation & Maintenance

- All hydraulic safety & controlling components built in, no additional selection required
- Lifting bars for an installation without any difficulty or risk
- Easy access for maintenance operations
- Refrigerant pump down operation

Maintenance Support

Diagnostics function for trouble shooting

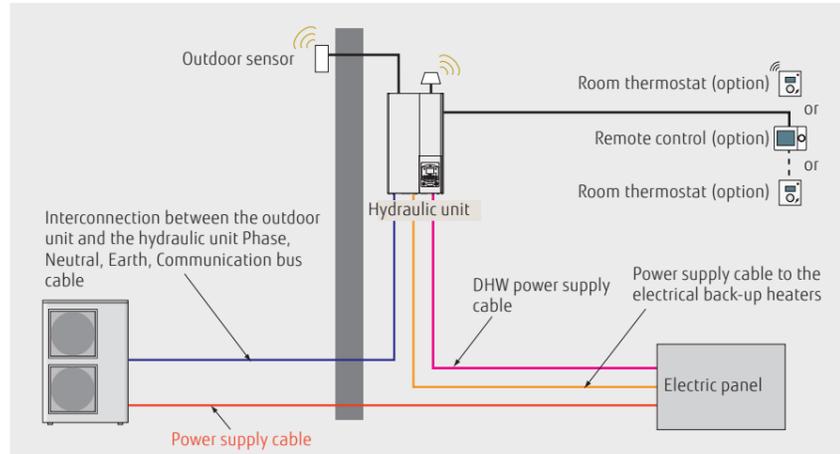
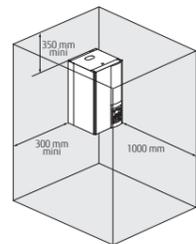


Installation Limitations

Equipment Installation & Electrical Wiring

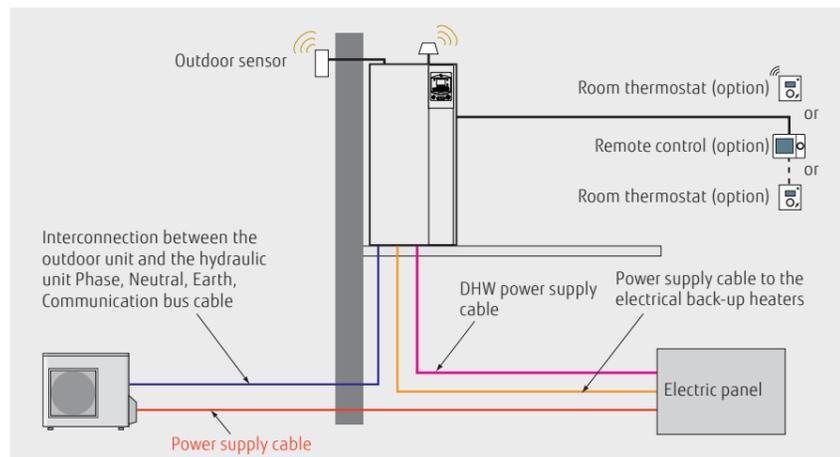
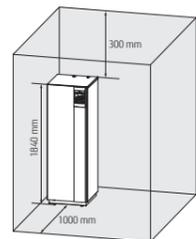
Split type Hydraulic indoor unit

- Hydraulic indoor unit is to be hanged on the wall
- Weight ≤ 88 kg (including water)
- Space for maintenance should be respected



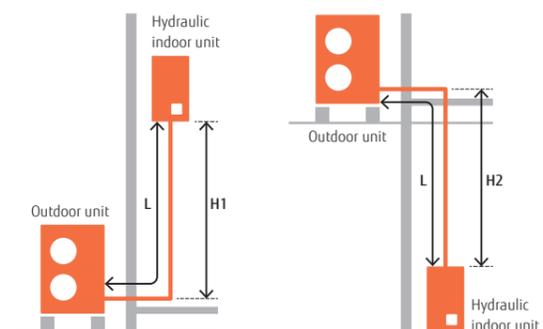
Split DHW integrated type Hydraulic indoor unit

- Floor standing
- Weight ≤ 393 kg (including water)
- Space for maintenance should be respected.

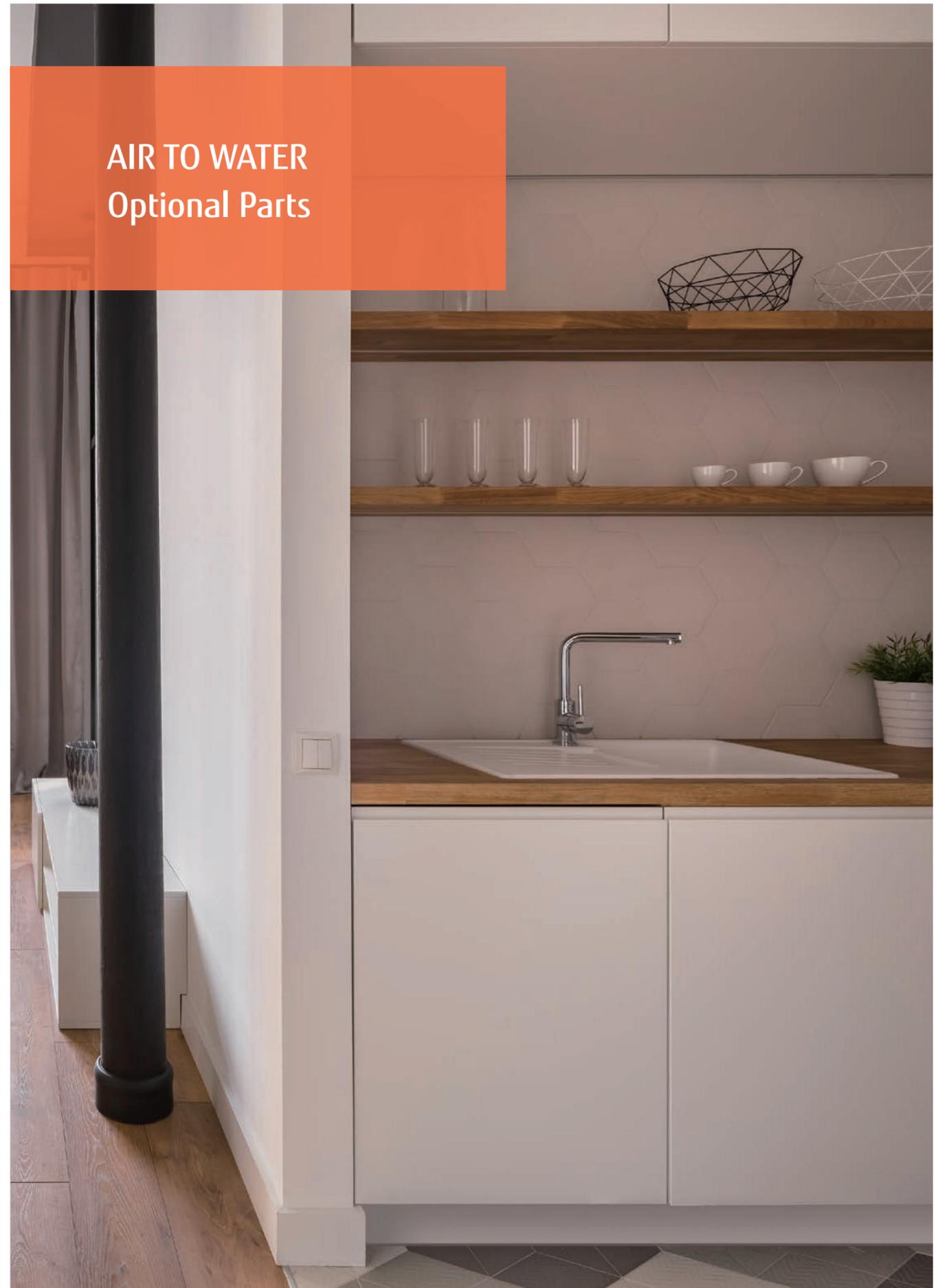


Piping and Wiring split type

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				
High power	11	9.52/15.88	+15	-15	5-20
	14				
	16				
Super High power	16	9.52/15.88	+15	-25	5-30



AIR TO WATER Optional Parts



Optional Parts

Product Name	Model Name	Split										Split DHW integrated type											
		Super High Power		High Power				R32 Comfort				Super High Power		High Power				R32 Comfort					
		10	16	10		14		30		10		10	16	10		14		30		10			
		10	16	11	14	11	14	16	5	6	8	10	10	16	11	14	11	14	16	5	6	8	10
2nd 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 Liter 300 Liter	•	•	•	•	•	•	•	•	•	•	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1
	200 Liter 300 Liter	•	•	•	•	•	•	•	•	•	•	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1	_*1
DHW expansion kit	UTW-KDEXE	-	-	-	-	-	-	-	-	-	-	•	•	•	•	•	-	-	-	-	-	-	-
	UTW-KDEXL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	•	•	•	•
Circulating Pump	UTW-PHFXG	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-
Swimming Pool Kit	UTW-KSPXD*6	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
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										Split DHW integrated type											
		Super High Power		High Power				R32 Comfort				Super High Power		High Power				R32 Comfort					
		10	16	10		14		30		10		10	16	10		14		30		10			
		10	16	11	14	11	14	16	5	6	8	10	10	16	11	14	11	14	16	5	6	8	10
Cascade Slave Kit (incl. LPB Clip)	UTW-KCSXE	-	-	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HMI Kit	UTW-KHMXE*2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Remote Controller	UTW-C74TXF*2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	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	•*5	•*5	•*5	•*5	-	-	-	-
Service Tool (incl. OCI700 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
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
External Connect Kit	UTY-XWZXZ2	-	-	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	UTY-XWZXZ3	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Back-up Heater	UTW-HS6XG	-	-	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	UTW-HT9XG	-	-	-	-	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical back-up heater relay	UTW-KBHXL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	

• : Available - : Not Available
 *1: DHW operation is possible without DHW Kit and DHW Tank.
 *2: 19 Languages included, no separate Eastern European RC necessary. C74TXF: Built in Room Temperature sensor C74HXF: 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 optional parts necessary.
 *6: When using the Swimming pool kit (UTW-KSPXD), other devices (Radiator, DHW tank etc.) cannot be connected in the same system.