Residential

AIR TO WATER

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.

Heat Pump system framework

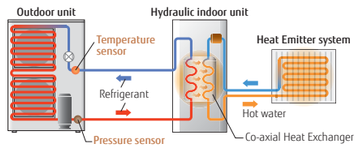
27 Models

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

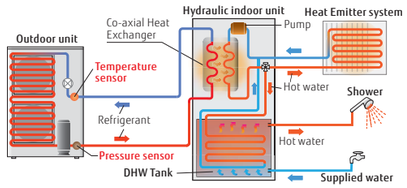
Optimization of refrigerant cycle operation

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

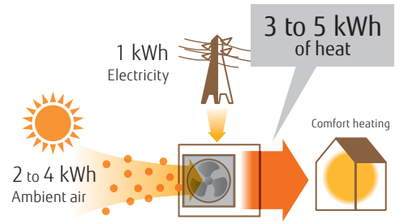


Split DHW Integrated type



What's a Heat Pump ?

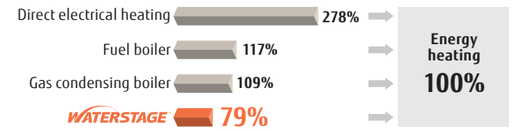
Absorbing free energy from the atmosphere. Heat Pump system requires only 1 kW of electricity to generate 3 to 5 kW thermal energy.



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					Monobloc 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	5/6 kW	8 kW
System outline	• 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.	• 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.		• 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.		• 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.	• 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.		• 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.	• 55°C hot water supply even at -10°C outdoor temperature • Cooling operation is possible. • Operating range is -10 to 46°C in cooling, -20 to 35°C in heating.
Power source	Single Phase, 230 V/50 Hz	3 Phase, 400 V/50 Hz	Single Phase, 230 V/50 Hz	3 Phase, 400 V/50 Hz	Single Phase, 230 V/50 Hz	Single Phase, 230 V/50 Hz	3 Phase, 400 V/50 Hz	Single Phase, 230 V/50 Hz	3 Phase, 400 V/50 Hz	Single Phase, 230 V/50 Hz	Single Phase, 230 V/50 Hz
Capacity 5 kW					WSYA050ML3 WOYA060KLT					WGYA050ML3 WOYA060KLT	CPYA050LLW
Capacity 6 kW					WSYA080ML3 WOYA060KLT					WGYA080ML3 WOYA060KLT	CPYA060LLW
Capacity 8 kW					WSYA080ML3 WOYA080KLT					WGYA080ML3 WOYA080KLT	CPYA080LLW
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 WOYK170LJ				

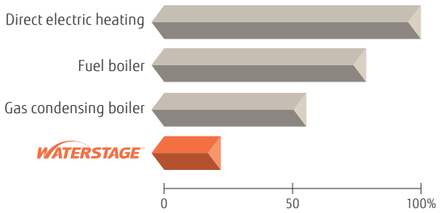
*Optional parts are required.

Benefits

Less
CO_2 Emissions

This environmentally-friendly system substantially reduces CO_2 emissions compared to conventional gas and hydro carbons combustion.

Average annual CO_2 emissions

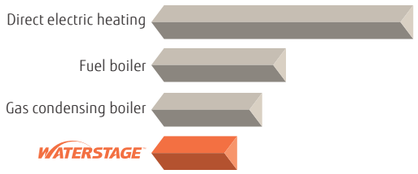


*Calculations based on data provided by European Program-2001` for EU 27
Fuel boiler efficiency: 89%, Gas boiler efficiency: 93%

Low
Running Cost

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

Average annual running cost

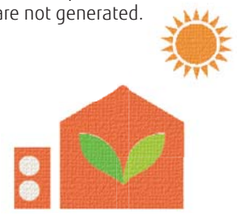


*The values may vary depending on installation, location, and operating conditions.

Clean
and Healthy

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

Environmentally friendly heating system



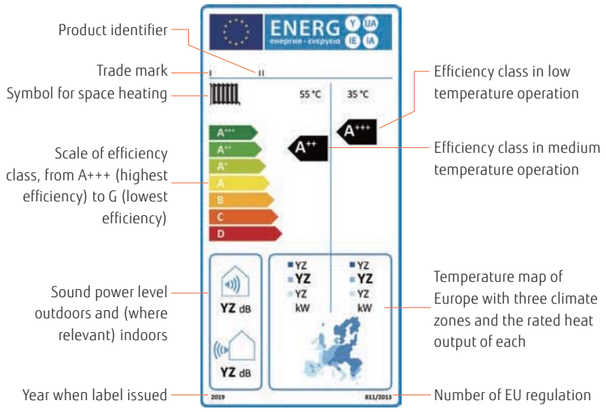
Easy
Installation and Maintenance

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

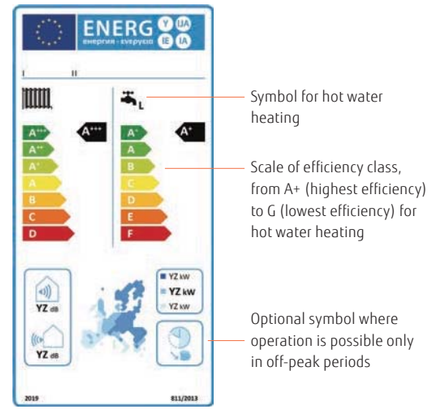
Well structured Hydraulic indoor unit.
Sophisticated arrangement of hydraulic units, allows easy piping and maintenance

Energy Efficiency standard
Product labels

For Space heaters



For Combination heaters



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 (ηs). 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

	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 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

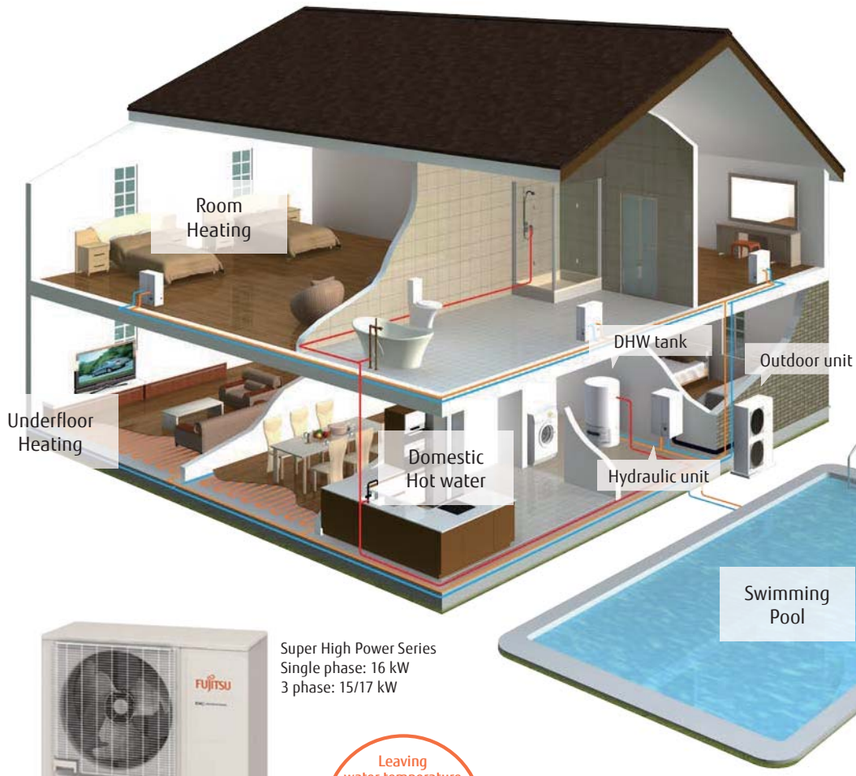
The CEN Heat Pump KEYMARK

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 have 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.

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

5/6 kW 8 kW 10 kW

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.

300 Liter

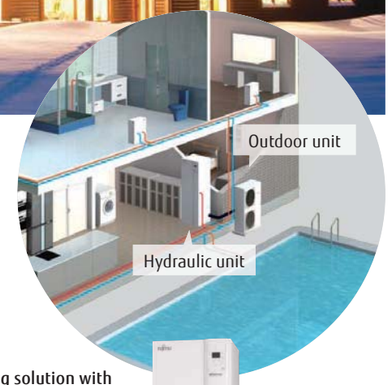
+ DHW Tank

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.

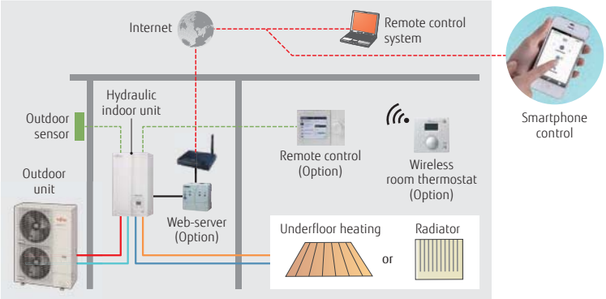
*Optional parts necessary



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

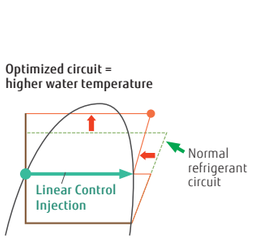
Twin Rotary Compressor

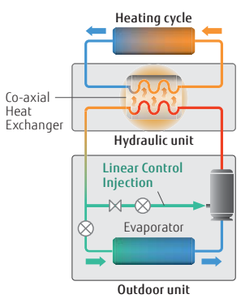
Linear Control Injection Port

For Outdoor Unit

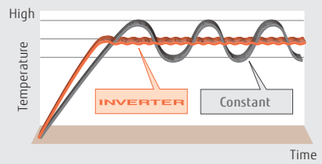
Twin Rotary Compressor with Linear Control Injection Port

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.

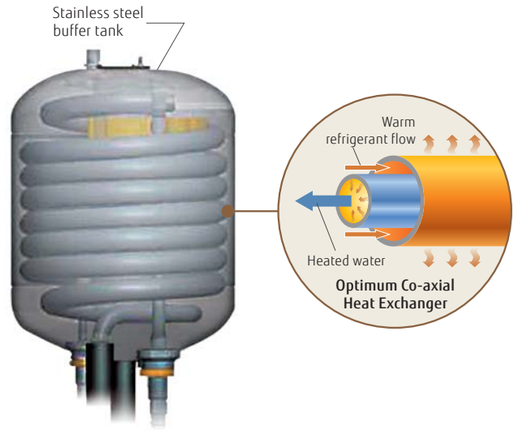




Accurate temperature control by DC inverter technology



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

WATERSTAGE™

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.

Comfort Series

High COP

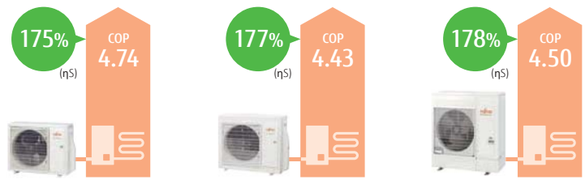
Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.

Energy efficiency class A+++*

*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (η_s)

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



Comfort Series 5kw class | Comfort Series 8kw class | Comfort Series 10kw 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 efficient DC twin rotary compressor

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

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

Hydraulic indoor unit
Single phase

Outdoor unit
Single phase
5/6kW

Outdoor unit
Single phase
8kW

Outdoor unit
Single phase
10kW

Specifications

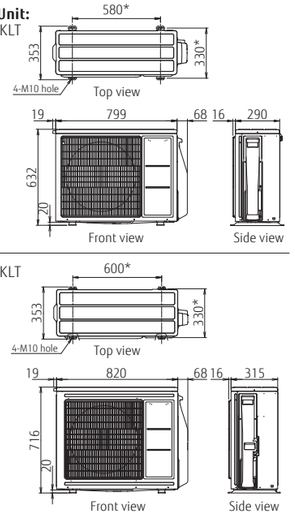
Model Name	Hydraulic indoor unit		WSYA050ML3	WSYA080ML3	WSYA080ML3	WSYA100ML3
	Outdoor unit		WOYA060KLT	WOYA060KLT	WOYA080KLT	WOYA100KLT
Capacity range			5	6	8	10
7°C/35°C floor heating *1	Heating capacity	kW	4.50	5.50	7.50	9.50
	Input power		0.949	1.18	1.69	2.11
	COP		4.74	4.65	4.43	4.50
2°C/35°C floor 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
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 indoor unit	dB(A)	40 / -	40 / -	40 / -	40 / -
	Outdoor unit		57 / -	57 / -	60 / -	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	13.2/30.0
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	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
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)	R32(675)	R32(675)	R32(675)
	Charge	kg	0.97	0.97	1.02	1.63
Additional refrigerant charge amount		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
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: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 besed on mesurement of EN12102 standard under conditions of EN14825 standard.

Dimensions

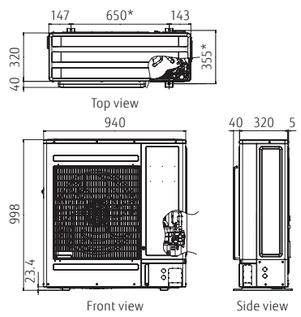
(Unit:mm)

Outdoor Unit:
WOYA060KLT

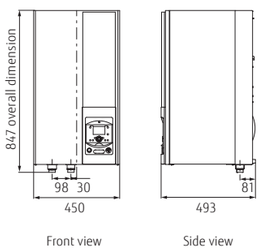


WOYA080KLT

WOYA100KLT



Hydraulic Indoor Unit:
WSYA050ML3/WSYA080ML3/WSYA100ML3



*Pitch of bolts for installation

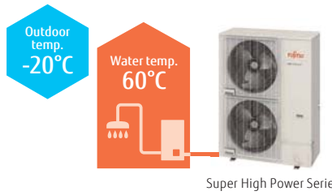
Split Type
Super High Power Series

WATERSTAGE™

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.



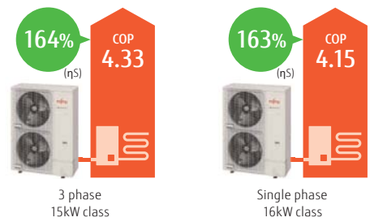
Super High Power Series

High COP

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

Energy efficiency class **A++**

Seasonal space heating energy efficiency (η_s)
Condition : Outdoor Temp. 7°C Heating Temp. 35°C.



3 phase 15kW class

Single phase 16kW class

Extended Operating Range down to -25°C

Improved operating range down to -25°C outdoor temperature

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


Hydraulic indoor unit
Single phase/
3 phase


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

Specifications

Model Name	Hydraulic indoor 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

Space heating characteristics*2								
Temperature application		℃	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 indoor unit	dB(A)	45	45	45	45	45	45
	Outdoor unit		67	66	67	66	67	68

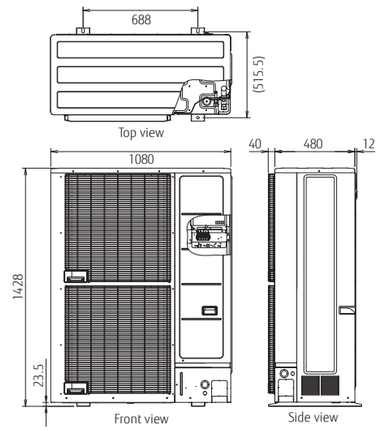
Hydraulic indoor unit Specification						
Power source			Single phase, 230 V 50 Hz	3 phase, 400 V 50 Hz		
Dimensions H×W×D		mm	805 × 450 × 471	805 × 450 × 471		
Weight (Net)		kg	52.5	52.5		
Water circulation	Min./Max.	L/min	26.4/57.8	24.0/54.2	27.3/61.4	
Buffer tank capacity		L	22	22		
Expansion vessel capacity		L	10	10		
Leaving water temperature range	Max.	℃	60	60		
Water pipe connection diameter	Flow/Return	mm	Ø 25.4/Ø 25.4	Ø 25.4/Ø 25.4		
Backup heater	Capacity	kW	6.0(3.0kW×2pcs.)	9.0(3.0kW×3pcs.)		
Outdoor unit specification						
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 amount		g/m	50	50	50	
Connection pipe	Diameter	Liquid / Gas mm	Ø 9.52 / Ø 15.88	Ø 9.52 / Ø 15.88	Ø 9.52 / Ø 15.88	
	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 ℃	-25 to 35	-25 to 35	-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/

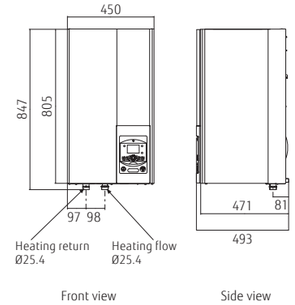
Dimensions

(Unit:mm)

Outdoor Unit:
Single phase: WOYG160LJL
3 phase: WOYK150LJL/WOYK170LJL



Hydraulic Indoor Unit:
Single phase : WSYG160DJ6
3 phase: WSYK170DJ9



Split Type
High Power Series

WATERSTAGE™

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 Power Series

High COP

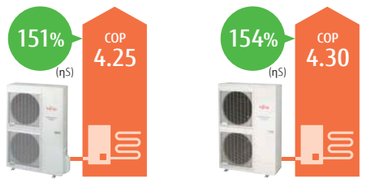
Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.

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.



Single phase 11kW class

3 phase 11kW class

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

Hydraulic indoor unit
Single phase/
3 phase

Outdoor unit
Single phase
11/14 kW

Outdoor unit
3 phase
11/14/16 kW

Specifications

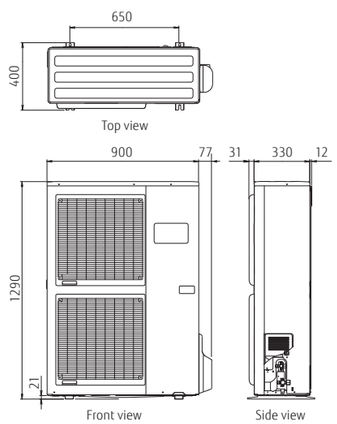
Model Name	Hydraulic indoor unit		WSYG140DG6	WSYG140DG6	WSYK160DG9	WSYK160DG9	WSYK160DG9
	Outdoor unit		WOYG112LHT	WOYG140LCTA	WOYK112LCTA	WOYK140LCTA	WOYK160LCTA
Capacity range			11	14	11	14	16
7°C/35°C floor heating *1	Heating capacity	kW	10.80	13.50	10.80	13.50	15.17
	Input power		2.54	3.23	2.51	3.20	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
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	dB(A)	46	46	46	46	46
	Outdoor unit		68	69	69 / 68	70 / 68	71
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		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		
Leaving water temperature range	Max.	°C	60		60		
Water pipe connection diameter	Flow/Return	mm	Ø 25.4/Ø 25.4		Ø 25.4/Ø 25.4		
Backup heater	Capacity	kW	6.0(3.0kW×2pcs.)		9.0(3.0kW×3pcs.)		
Outdoor unit specification							
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 amount		g/m	50				
Connection pipe	Diameter Liquid	mm	Ø 9.52				
	Diameter Gas		Ø 15.88				
	Length	Min./Max.	m	5/20			
	Length(Pre-charge)		m	15			
	Height difference	Max.	m	15			
Operating range	Heating	°C	-25 to 35				

*1: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/

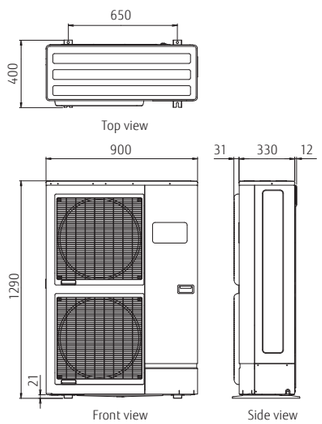
Dimensions

(Unit:mm)

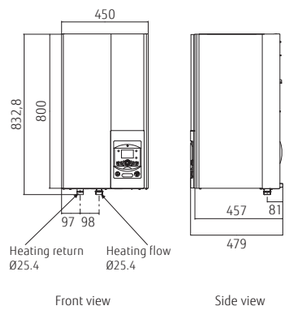
Outdoor Unit:
Single phase: WOYG112LHT/WOYG140LCTA



3 phase: WOYK112LCTA/WOYK140LCTA/WOYK160LCTA



Hydraulic Indoor Unit:
Single phase: WSYG140DG6
3 phase: WSYK160DG9



Split DHW Integrated Type

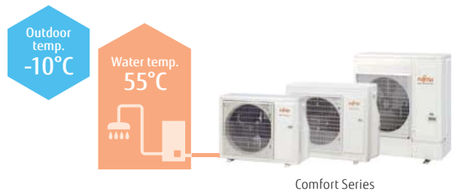
Comfort Series

WATERSTAGE™

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.



Comfort Series

High COP

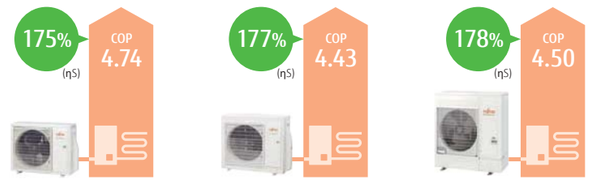
Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.

Energy efficiency class A+++*

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

Hydraulic indoor unit
Single phase

Outdoor unit
Single phase
5/6kW

Outdoor unit
Single phase
8kW

Outdoor unit
Single phase
10kW

Specifications

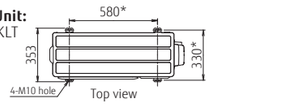
Model Name				WGYA050ML3		WGYA080ML3		WGYA080ML3		WGYA100ML3	
	Outdoor unit			WOYA060KLT		WOYA060KLT		WOYA080KLT		WOYA100KLT	
Capacity range				5		6		8		10	
7°C/35°C floor heating *1	Heating capacity	kW		4.50		5.50		7.50		9.50	
	Input power			0.949		1.18		1.69		2.11	
	COP			4.74		4.65		4.43		4.50	
2°C/35°C 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	
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 indoor unit		dB(A)	40	-	40	-	40	-	40	-
	Outdoor unit			57	-	57	-	60	-	62	-
Domestic hot water characteristics*2											
Load profile				L		L		L		L	
Energy efficiency class				A+		A+		A+		A+	
Energy efficiency(η_{wh})			%	130		130		130		130	
Annual electricity consumption			kWh	793		793		793		793	
Hydraulic 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)		R32(675)		R32(675)		R32(675)	
	Charge		kg	0.97		0.97		1.02		1.63	
Additional refrigerant charge amount			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	

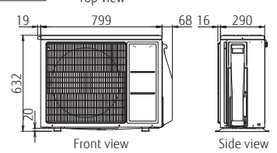
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
*2:All information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

Dimensions

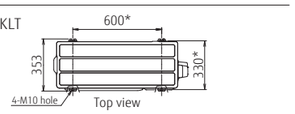
(Unit:mm)

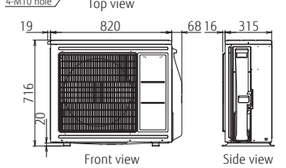
Outdoor Unit:
WOYA060KLT



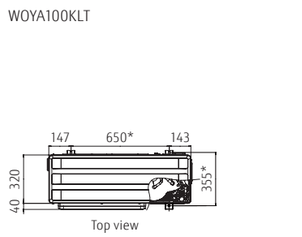


WOYA080KLT

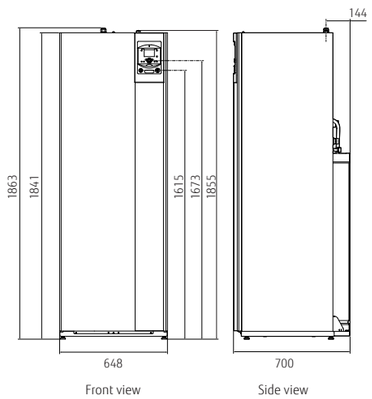




WOYA100KLT



Hydraulic Indoor Unit:
WGYA050ML3/WGYA080ML3/WGYA100ML3



*Pitch of bolts for installation

Split DHW Integrated Type

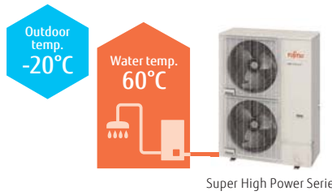
Super High Power Series

WATERSTAGE™

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.



Super High Power Series

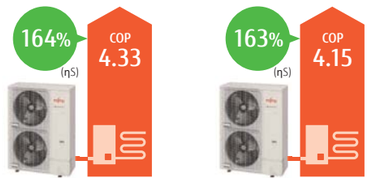
High COP

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.



3 phase
15kW class

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

Hydraulic indoor unit
Single phase/
3 phase

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

Specifications

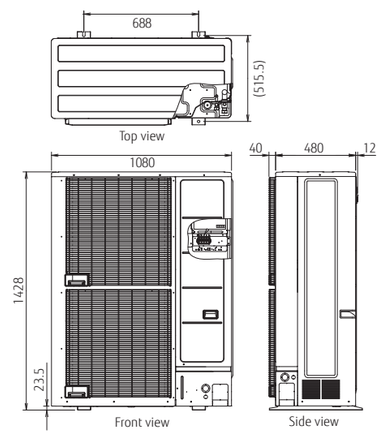
Model Name				WGYG160DJ6	WGYK170DJ9	WGYK170DJ9
	Hydraulic indoor unit			WGYG160DJ6	WGYK170DJ9	WGYK170DJ9
	Outdoor unit			WOYG160LJL	WOYK150LJL	WOYK170LJL
Capacity range				16	15	17
7°C/35°C floor heating *1	Heating capacity	kW		16.00	15.00	17.00
	Input power			3.86	3.46	4.10
	COP			4.15	4.33	4.15
2°C/35°C 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
Space heating characteristics*2						
Temperature application			℃	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 indoor 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 indoor unit Specification						
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		
Hot water heater capacity			kW	1.5		
Buffer tank capacity			L	22		
Expansion vessel capacity			L	12		
Leaving water temperature range	Max.		℃	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						
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 amount			g/m	50	50	
Connection pipe	Diameter	Liquid	mm	Ø 9.52	Ø 9.52	
		Gas		Ø 15.88	Ø 15.88	
	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	℃	-25 to 35	-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/

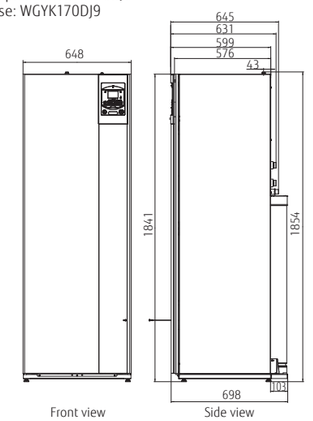
Dimensions

(Unit:mm)

Outdoor Unit:
Single phase: WOYG160LJL
3 phase: WOYK150LJL/WOYK170LJL



Hydraulic Indoor Unit:
Single phase: WGYG160DJ6
3 phase: WGYK170DJ9



Split DHW Integrated Type

High Power Series

WATERSTAGE™

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 Power Series

High COP

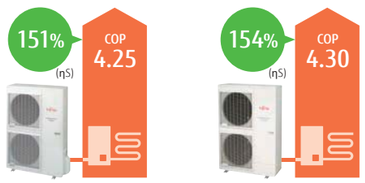
Waterstage Air to water heat pumps work much more efficiently and save energy compared to traditional heating systems.

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.

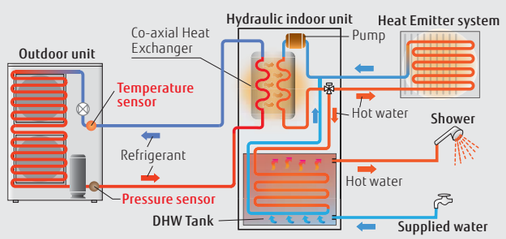


Single phase 11kW class

3 phase 11kW class

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

Hydraulic indoor unit
Single phase/
3 phase

Outdoor unit
Single phase
11/14 kW

Outdoor unit
3 phase
11/14/16 kW

Specifications

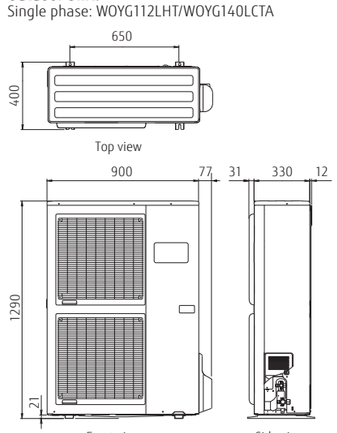
Model Name	Hydraulic indoor unit		WGYG140DG6		WGYG140DG6		WGYK160DG9		WGYK160DG9		WGYK160DG9	
	Outdoor unit		WOYG112LHT		WOYG140LCTA		WOYK112LCTA		WOYK140LCTA		WOYK160LCTA	
Capacity range			11		14		11		14		16	
7°C/35°C floor heating *1	Heating capacity	kW	10.80		13.50		10.80		13.50		15.17	
	Input power		2.54		3.23		2.51		3.20		3.70	
	COP		4.25		4.18		4.30		4.22		4.10	
2°C/35°C floor heating *1	Heating capacity	kW	10.77		12.00		10.77		13.00		13.50	
	Input power		3.44		3.87		3.40		4.15		4.34	
	COP		3.13		3.10		3.17		3.13		3.11	
-7°C/35°C floor heating*1	Heating capacity	kW	10.38		11.54		10.38		12.20		13.50	
	Input power		4.32		5.08		4.28		5.13		5.40	
	COP		2.40		2.27		2.43		2.38		2.50	
Space heating characteristics*2												
Temperature application		°C	55	35	55	35	55	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	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 indoor unit Specification												
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									
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												
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 amount		g/m	50									
Connection pipe Diameter	Liquid	mm	Ø 9.52									
	Gas		Ø 15.88									
Connection pipe Length	Min./Max.	m	5/20									
Length(Pre-charge)		m	15									
Height difference	Max.	m	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/

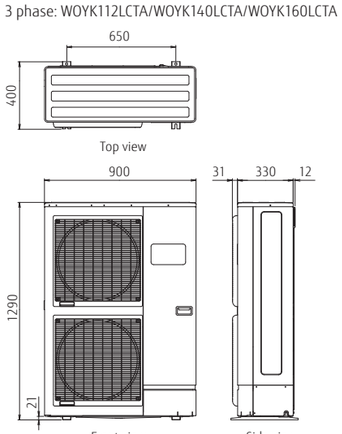
Dimensions

(Unit:mm)

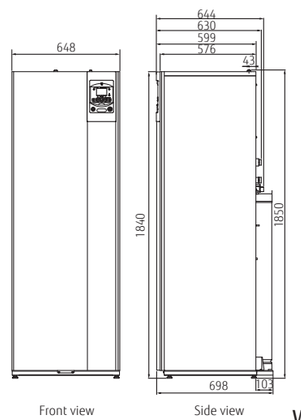
Outdoor Unit:
Single phase: WOYG112LHT/WOYG140LCTA



3 phase: WOYK112LCTA/WOYK140LCTA/WOYK160LCTA



Hydraulic Indoor Unit:
Single phase: WGYG140DG6
3 phase: WGYK160DG9



Control Overview

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

Individual Control

Wireless Remote Control(option)
Room Thermostat
UTW-C58XD

Wired Remote Control (option)
Room Thermostat
UTW-C55XA

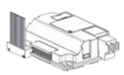
Wired Remote Control (option)
Remote Control
UTW-C74TXF*1
UTW-C74HXF*1

RF Module

UTW-MRCXD

Adaptor for external device

Web server (option)
UTW-KW1XD
UTW-KW4XD



Modbus clip (option)
UTW-KMBXJ*2

*2:Additional optional parts necessary.

Internet

Remote control system

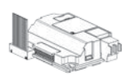
Smartdevice control

Home Automation system

Super High Power Series
Hydraulic indoor unit

Servicer & Maintenance Tool

Web server (option)
UTW-KW1XD
UTW-KW4XD



LPB clip (option)
UTW-KL1XD

Service Tool (option)

UTW-KPSXD*3
Software

UTW-KSTXD*4

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

Hydraulic Indoor Unit Controller

Simple operation mode setting
- Selecting the heating mode and Domestic hot water operation

Large LCD display
- Operation status display
- Error display
- plain text

Navigation and setting
- Selecting the heating menu
- Setting program timer

HMI Kit (option)
UTW-KHMXE
Corresponding to multi languages

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

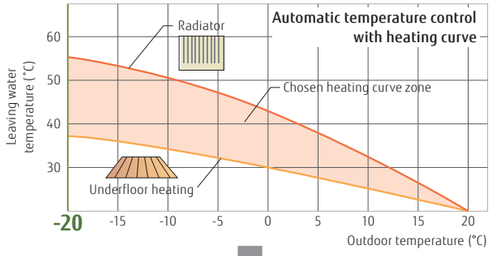
3. Comfort mode
Constant comfort temperature

4. Protection mode
Stand-by mode with anti-frost protection

Useful Function

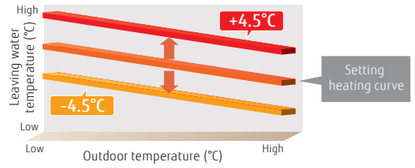
Automatic heating curve control

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.

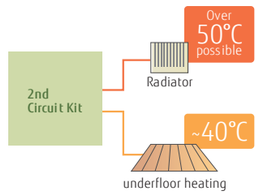
Auto-changeover

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

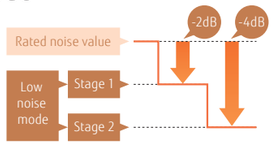
*1: Optional parts are required.



2 Stage low noise mode

Outdoor unit can be switched to silent mode, depending on the installation environment.

*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

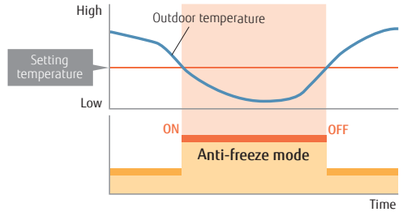
Anti-legionella function

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

DHW Tank 300 L

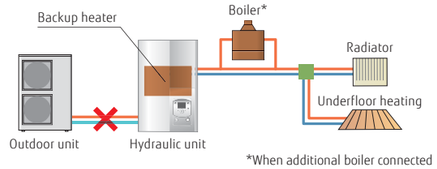
Anti-freeze function

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



Emergency operation

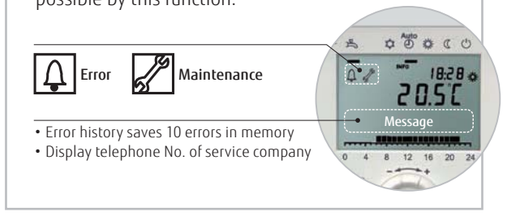
System can continuously supply hot water by built in back up heater or boiler, as emergency, even if an error is occurred.



*When additional boiler connected

Error/Maintenance alarm

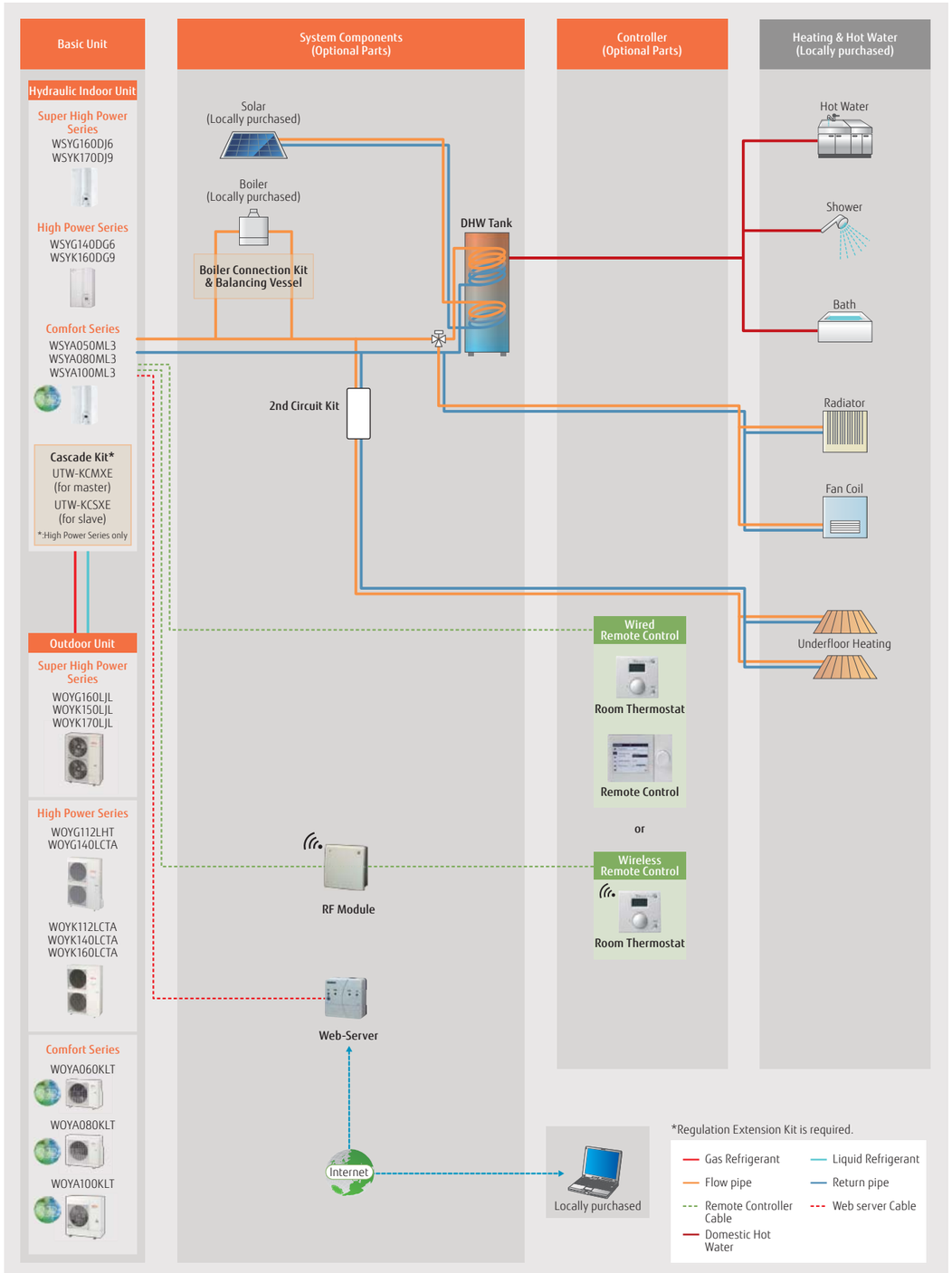
Quick error handling service and maintenance are possible by this function.



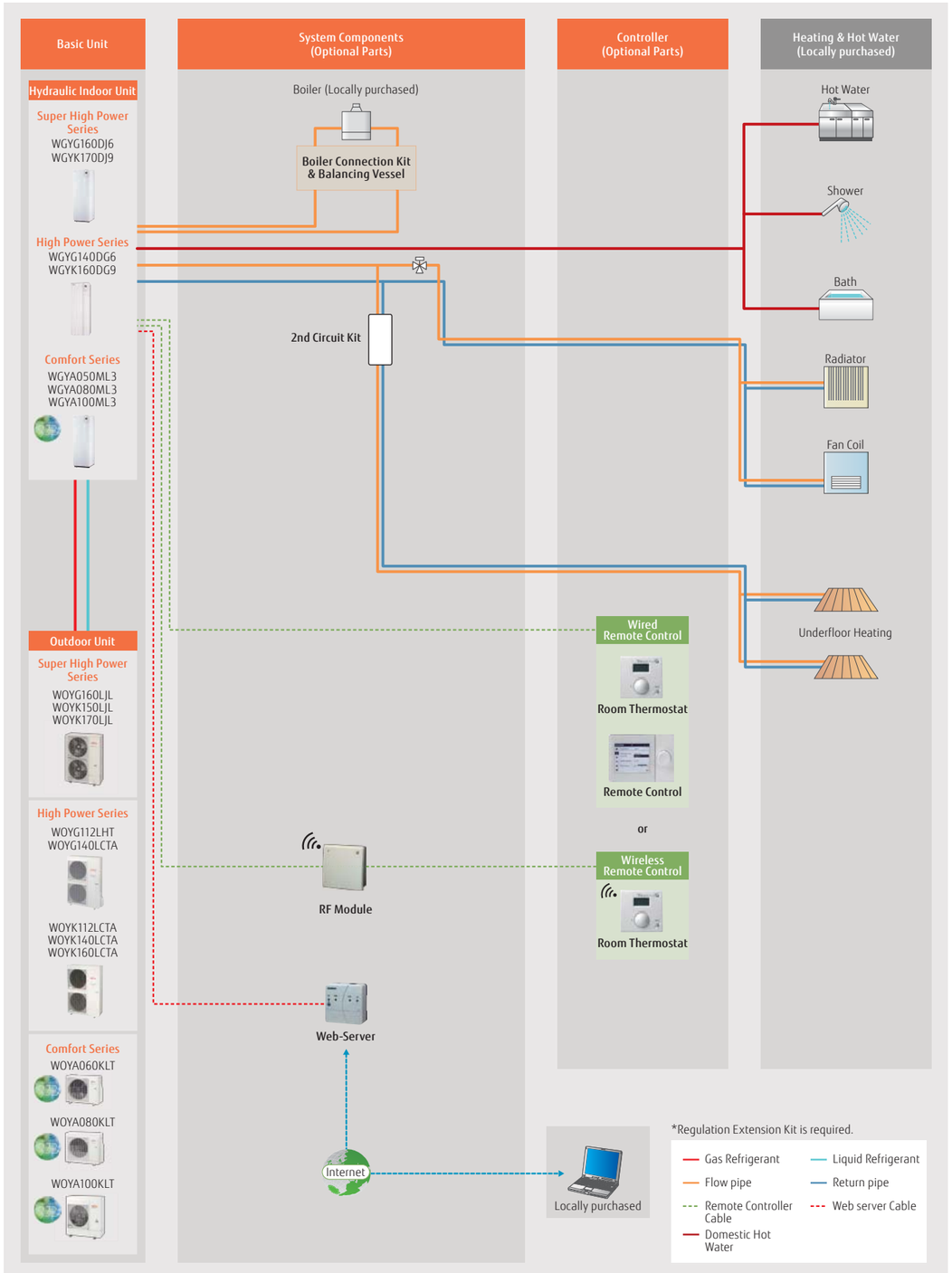
- Error history saves 10 errors in memory
- Display telephone No. of service company

System Configuration

Split Type



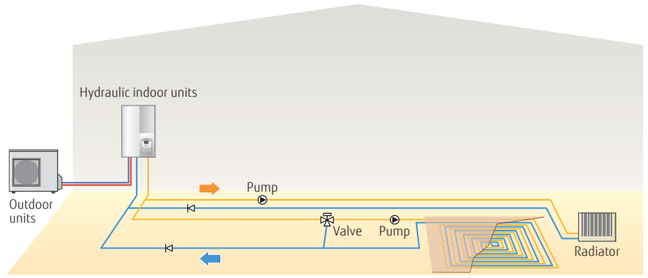
Split DHW Integrated Type



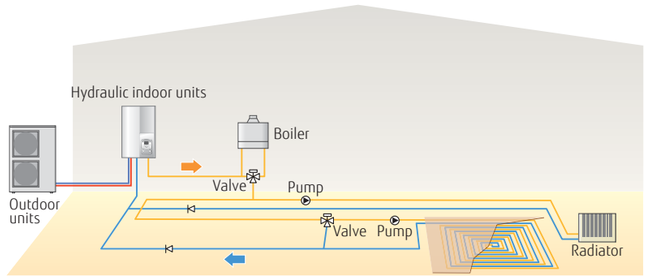
Case Studies

Split Type

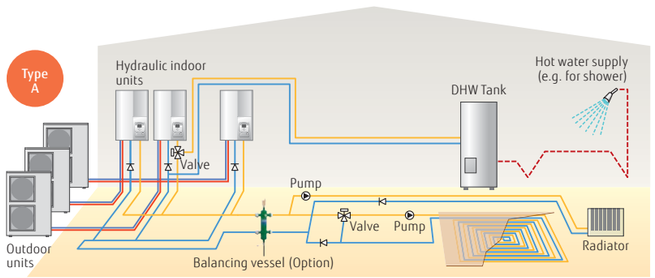
2 emitter simultaneous heating (Individual control)
Underfloor heating + Radiator

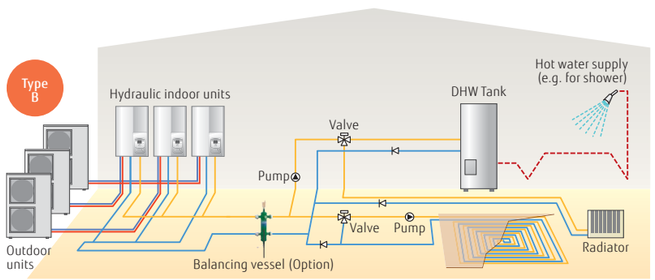


Boiler connected to heating (Boiler + Heating)



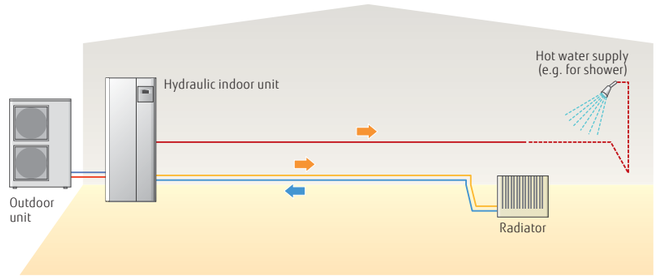
2 emitter simultaneous heating & Domestic Hot Water (Cascade)



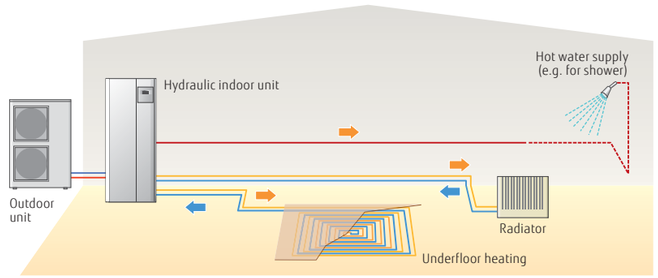


Split DHW Integrated Type

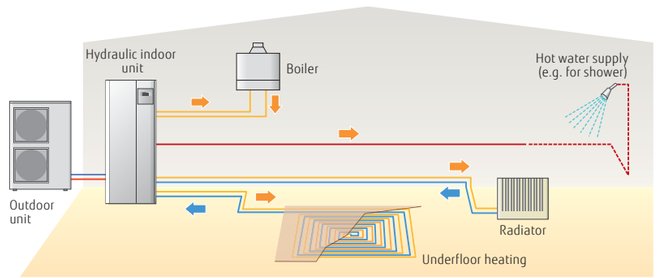
Single heating & Domestic Hot Water
Radiator + Domestic Hot Water



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



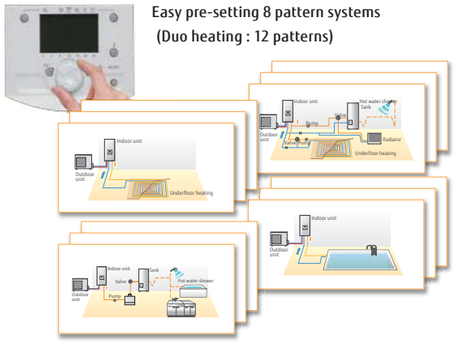
Boiler connected to heating (Boiler + Heating) & Domestic Hot Water



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.



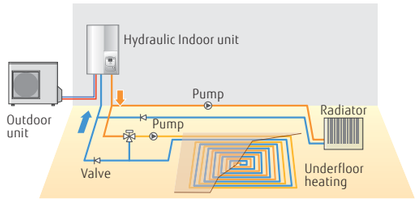
Easy pre-setting 8 pattern systems (Duo heating : 12 patterns)

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

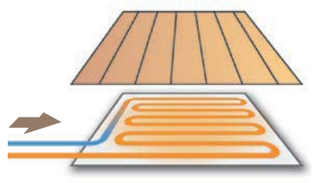
It can be checked whether each unit operates correctly under the set conditions and expected outdoor temperatures when the system is actually assembled.



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.

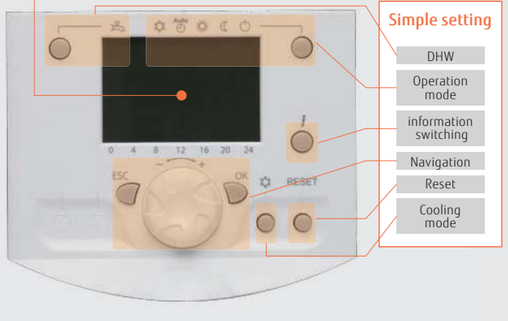


Set temperature
Maximum 75°C

Set period
Maximum 25 days

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

Large display
Display of all segments operation mode indicate
•Clock •Temperature •DHW •Message •Service/maintenance •Timer menu



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

Error display

How to know which error has appeared

When an error is occurring
Error symbol appears on the controller

Detailed information will be displayed
- Error code
- Error designation
- Clear text info (UART)

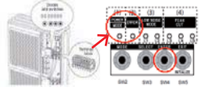
press "Info" button

Hydraulic indoor unit error

When an error is occurring green and red LED flash along with error cause

Confirm flashing times

Outdoor unit error



For High Power model and Super High power model

When an error is occurring
POWER / MODE : ON
ERROR : Blinks rapidly

Confirm blink code for error code indication

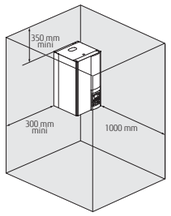
Check the error code table

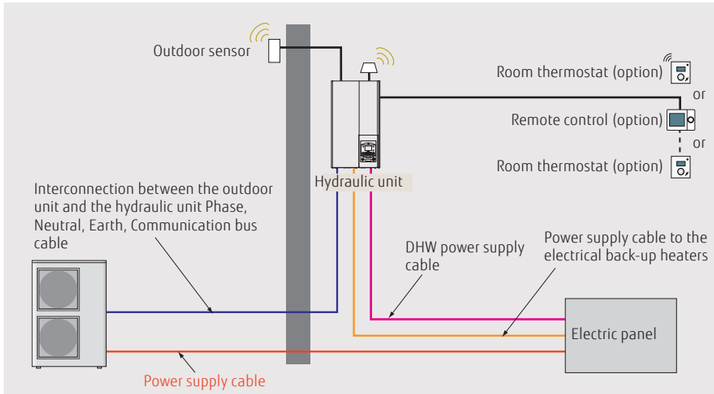
Installation Limitations

Equipment Installation & Electrical Wiring

Split type Hydraulic indoor unit

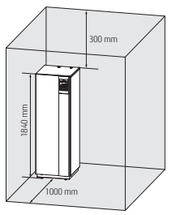
- Hydraulic indoor unit is to be hanged on the wall
- Weight ≦ 88 kg (including water)
- Space for maintenance should be respected

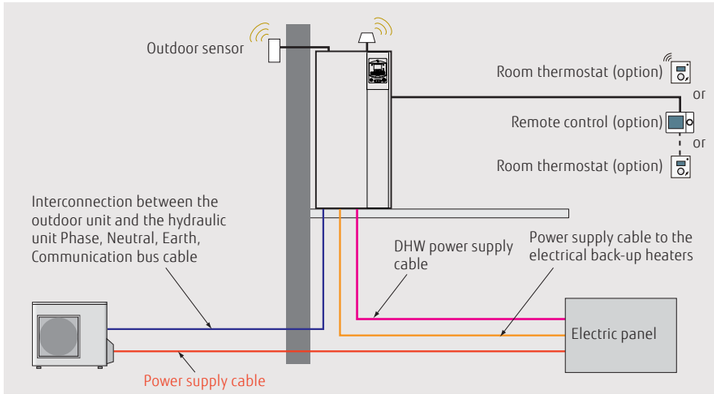




Split DHW integrated type Hydraulic indoor unit

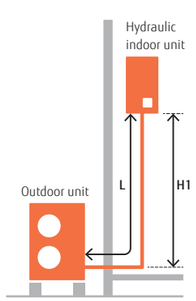
- Floor standing
- Weight ≦ 393 kg (including water)
- Space for maintenance should be respected.

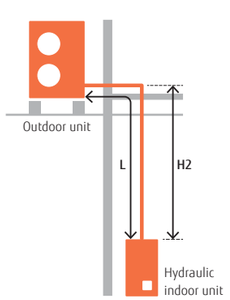




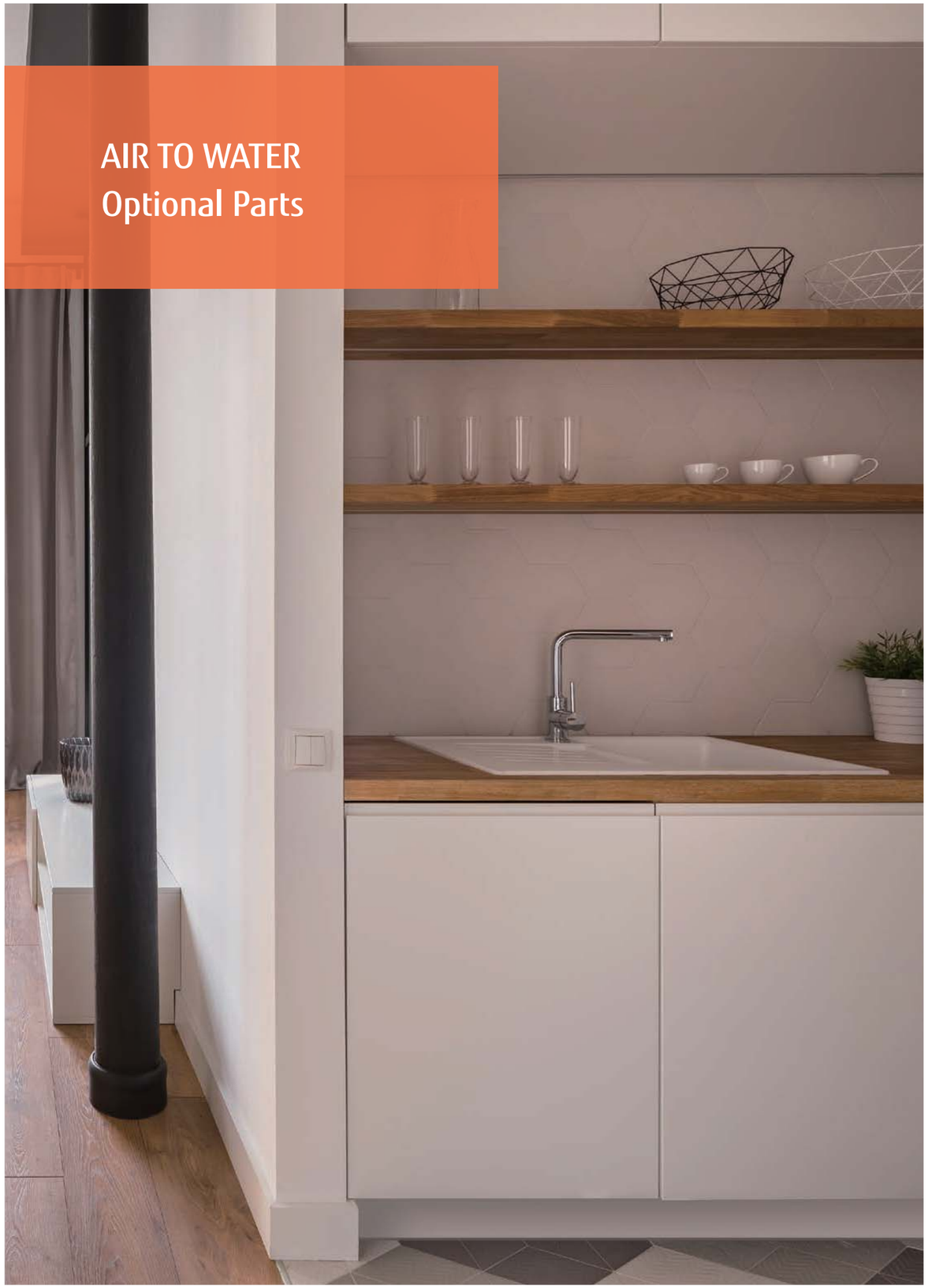
Piping and Wiring Split type

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	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				





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			
		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
2nd Circuit Kit	UTW-KZSXE	–	–	–	●	●	●	●	●	●	●	●	●	–	–	–	–	–	–	–	–	–	–	–	–
	UTW-KZDXE	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	●	●	●	●	●	●	●	●	●
	UTW-KZSXJ	●	●	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	UTW-KZDXJ	–	–	–	–	–	–	–	–	–	–	–	–	●	●	●	–	–	–	–	–	–	–	–	–
Boiler Connection Kit	UTW-KBSXD	–	–	–	●	●	●	●	●	●	●	●	●	–	–	–	–	–	–	–	–	–	–	–	–
	UTW-KBDXD	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	●	●	●	●	●	●	●	●	●
	DUO 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 UTW-T20AXH 300 Liter UTW-T30AXH	●	●	●	●	●	●	●	●	●	●	●	●	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1
	200 Liter UTW-T20BXH 300 Liter UTW-T30BXH	●	●	●	●	●	●	●	●	●	●	●	●	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1	–*1
DHW expansion kit	UTW-KDEXE	–	–	–	–	–	–	–	–	–	–	–	–	●	●	●	●	●	●	●	●	–	–	–	–
	UTW-KDEXL	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	●	●	●	●
Circulating Pump	UTW-PHFXG	●	●	●	●	●	●	●	●	–	–	–	–	●	●	●	●	●	●	●	●	–	–	–	–
Swimming Pool Kit	UTW-KSPXD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
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			
		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
Cascade Slave Kit (incl. LPB Clip)	UTW-KCSXE	–	–	–	●	●	●	●	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
HMI Kit	UTW-KHMXE*2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Remote Controller Wired	UTW-C74TXF*2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	UTW-C74HXF*2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Room Thermostat Wired	UTW-C55XA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Room Thermostat 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	●*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	●*3	●*3
Service Tool Software	UTW-KPSXD	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4
External Connect Kit	UTY-XWZXZ2	–	–	–	●	●	●	●	●	–	–	–	–	–	–	–	●	●	●	●	●	–	–	–	–
	UTY-XWZXZ3	●	●	●	–	–	–	–	–	–	–	–	–	●	●	●	–	–	–	–	–	–	–	–	–
Electrical 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.

New Monobloc Overview

ECO Design

The EUROPEAN UNION Regulations designed to precisely determine the Minimum Energy Efficiency Standards for Electric related Products ErP.

Mandatory compliance for the following standards:

- **Main components:** fans, pumps, motors.
- **Complete units:** Heat Pumps.

Different regulations and standards:

Heat pump units. Regulation. 813/2013.
Units are compliant with ErP Regulation by exceeding the minimum standards of seasonal energy efficiency in heating, SCOP

All-in-One Model

Compact designed heat pump. Refrigerant pipe work is unnecessary. Only hydraulic connecting work is to be done. Circulation pump, safety valve and air vent valve are included. Easy installation and maintenance is feasible.

5 kW/6 kW

8 kW

Easy Setting & Maintenance

On Board Controller With Led Display
Controller with included Display mounted on the door of unit's electric box. Connectable to BMS through Modbus RTU protocol over RS485 serial interface.

- 3 levels of access: user - service - manufacturer
- 4 push buttons and digit - icons visualization

Functions

- **Unit status graphical visualization:** heating / cooling / DHW / stand-by / alarm / defrost / economy
- Main Input / Output visualization (°C and %)
- Active alarms (code)
- History of the last 20 alarms (code, starting date and time)
- Alarms manual reset
- Set-point change, climatic curves
- Unit mode change: heating / cooling
- Hybrid plant management
- ON-OFF unit's key

UTW-CSKXL

UTW-CAVXL

Wired Remote Controller (Option)

Remote electronic control with LCD display and integrated room temperature sensor.

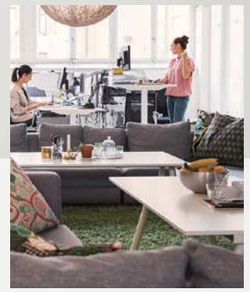
Functions

- Unit status graphical visualization: heating / cooling / DHW / stand-by / alarm
- Clock (date and time) visualization
- Temperature and room set-point visualization
- Room temperature set-point modification
- Active alarms (code)
- Time slots scheduling

Controller line

BMS

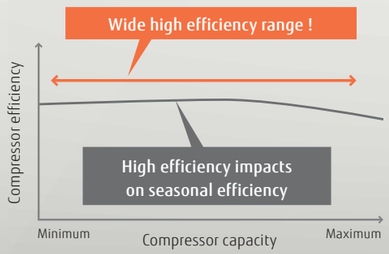
Controller line



All DC Inverter Technology

DC twin rotary compressor

The high efficiency DC inverter type "2-cylinder rotary compressor" is used for our product ranges. It has achieved higher energy efficiency compared with similar compressors by optimizing the structure inside the compressor.

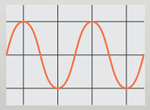


DC fan motor

DC fan motor produces high power, wide operation range, and high efficiency.

Sine-wave DC inverter control

High efficiency operation is realized by using a sine wave DC inverter control.

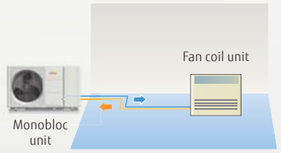


Complete solution meets various needs

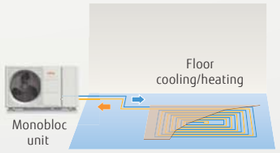
All hydraulic components for the unit installation are already included with no increase in dimensions.

System example

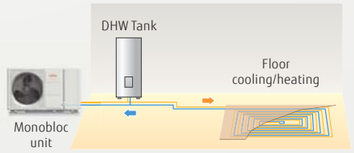
Fan coil unit



Floor Cooling/heating



Heating+DHW



NEW

Monobloc Type

WATERSTAGE™

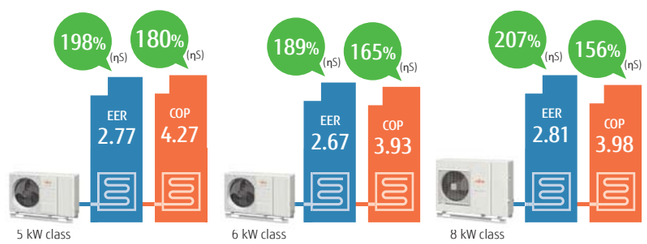
High energy saving

High Seasonal efficiency is realized by using a DC twin rotary compressor, inverter technology, and high efficient water heat exchanger.

Energy efficiency class **A+++***

*5 kW class, Temperature application: Heating Temp. 35°C.

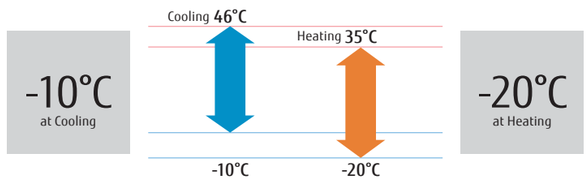
Seasonal space energy efficiency (η_s)



Condition: Cooling Temp. 7°C / Heating Temp. 35°C

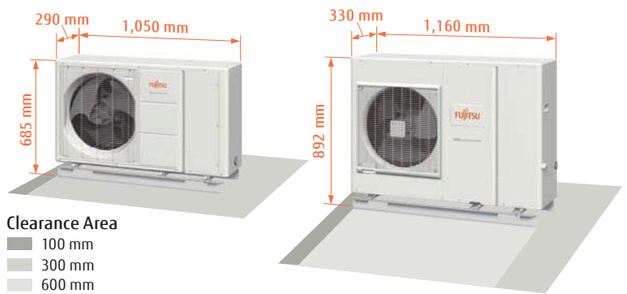
Supports a wide range of temperatures

Cooling operation is possible down to -10°C.



Compact Chassis size

It can be easily carried and installed in narrow spaces.



Model : CPYA050LLW/CPYA060LLW/CPYA080LLW

5 kW/6 kW　　8 kW

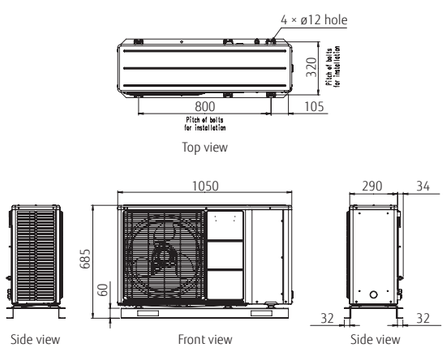
Specifications

Model Name						CPYA050LLW	CPYA060LLW	CPYA080LLW
Capacity range						5 kW	6 kW	8 kW
Performance	Cooling	Rated	A35/W7	Capacity	kW	4.71	5.52	8.36
				EER	–	2.77	2.67	2.81
			A35/W18	Capacity	kW	5.00	6.03	8.09
				EER	–	4.00	3.82	4.41
		ErP		SEER	–	5.02	4.79	5.25
				Etas	–	198	189	207
	Heating	Rated	A7/W35	Capacity	kW	6.11	7.03	9.78
				COP	–	4.27	3.93	3.98
			A7/W55	Capacity	kW	5.20	6.05	8.38
				COP	–	2.52	2.43	2.44
		ErP	35 degree	P rated	–	4	5	6
				Energy efficiency class	–	A+++	A++	A++
				Etas	%	180	165	156
			55 degree	P rated	–	4	4	5
				Energy efficiency class	–	A++	A+	A+
				Etas	%	125	119	113
Operating range	Cooling	Outlet water temperature (min/max)			°C	6/22		
		Ambient air temperature (min/max)				-10/46		
	Heating	Outlet water temperature (min/max)				20/55 (Ambient air temp. -10°C)		
						43 (Ambient air temp. -20°C)		
		Ambient air temperature (min/max)				-20 / 35		
Power source		–			–	1 phase 230 V 50 Hz		
Current		Max			A	14	19	20
Sound level		A35 / W7		Sound Power	dB(A)	68	68	69
		A7 / W55				64	69	69
Dimension		Height / Width / Depth			mm	685/1,050/290		892/1,160/330
		Gross Height / Width / Depth				875/1,131/398		1,075/1,258/437
Weight		Net / Gross			kg	70 / 80		92 / 104
Refrigerant		Type / Charge				R410A / 1.00	R410A / 1.20	R410A / 1.70
Fuse Capacity		–			A	20	25	25

Dimensions

(Unit : mm)

Outdoor Unit: CPYA050LLW/CPYA060LLW



Outdoor Unit: CPYA080LLW