



PRODUCT LINEUP

AIR TO WATER

For RESIDENTIAL

Room Heating & Cooling

Domestic Hot Water

Swimming Pool

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, bath, and swimming pool.

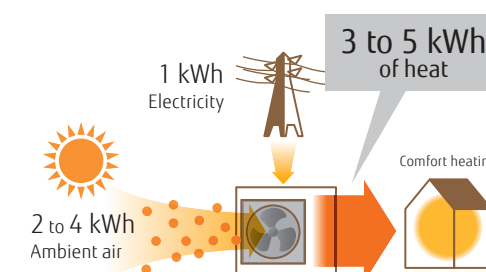
WATERSTAGE™



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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.

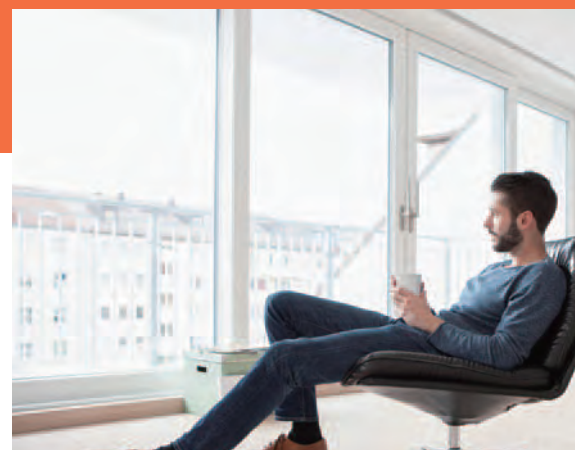




HOME HEATING

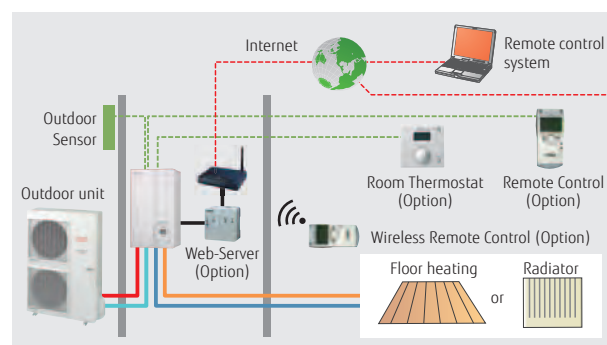
Wide range lineup suited for regional characteristics, family structure, and application. We provide various products to meet your needs from High Power via heating-centered series to reasonably-priced compact series

WATERSTAGE™



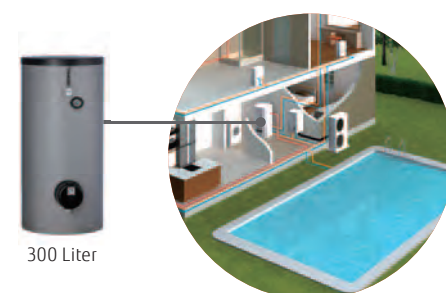
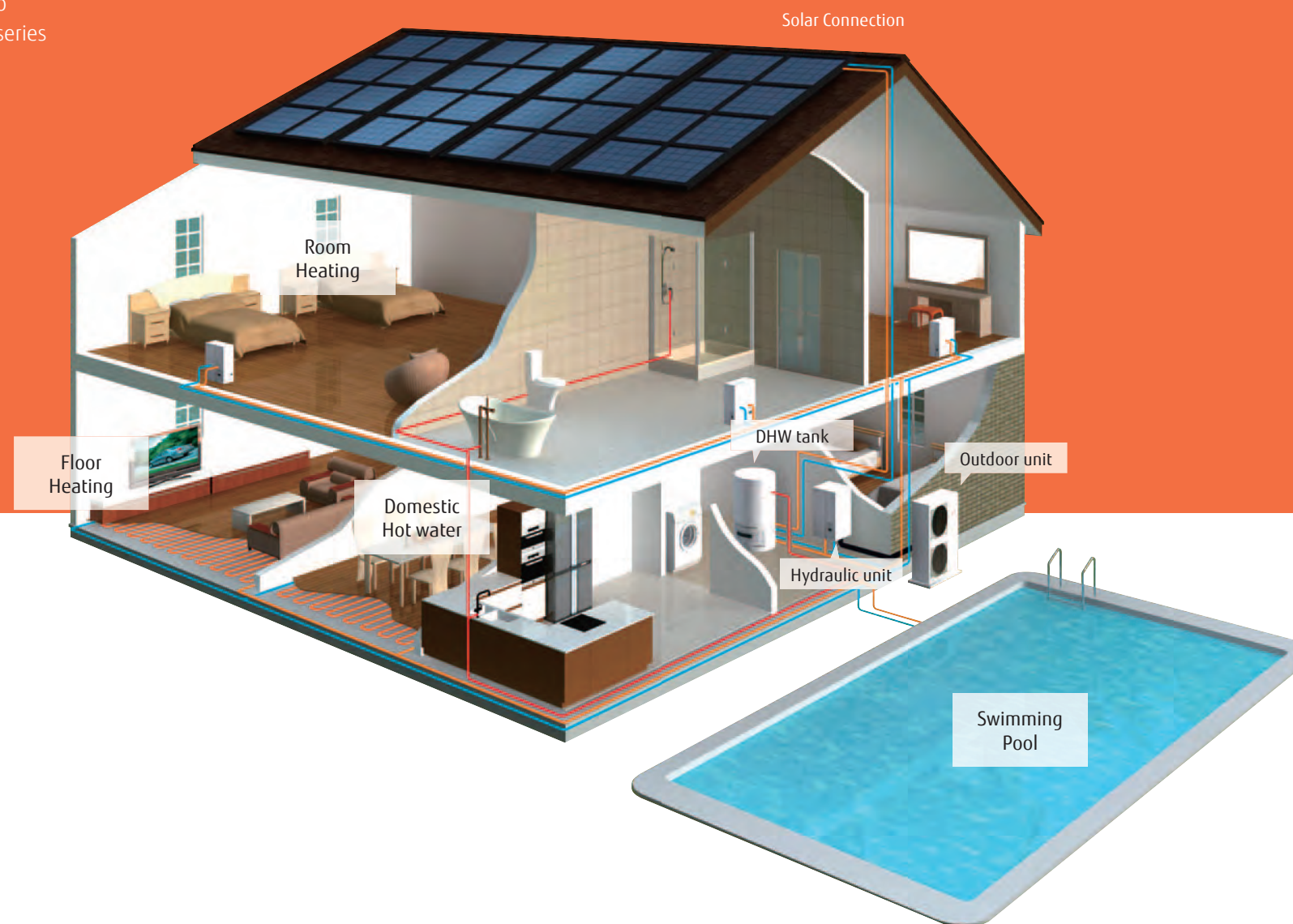
High leaving water temperature

High leaving water temperature 60°C kept down to -20°C outdoor temperature without using backup heater.



Smart control

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



+ 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 performed even at low outdoor temperature.

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. A larger heating capacity can be performed flexibly by using more units in cascade connection.

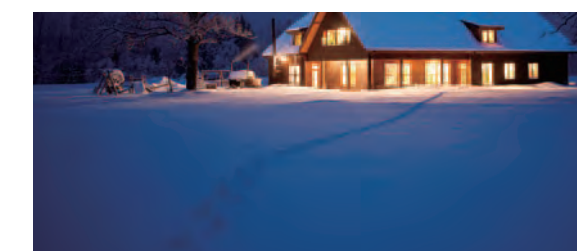


NEW

For Room heating & domestic hot water

Split type Super High Power series

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.



244 Page

Appearance-oriented compact outdoor unit

Split type Comfort series

For Comfort series, optimized flow temperature control is realized by DC inverter technology.

244 Page



Monobloc type

Outdoor unit and hydraulic indoor unit can be installed anywhere due to compact size. Installation work can be performed easily only by connecting hydraulic pipes. DHW tank can be connected to indoor side.

246 Page

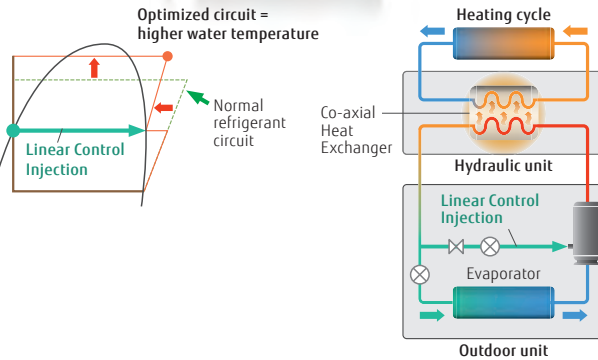


CORE TECHNOLOGY

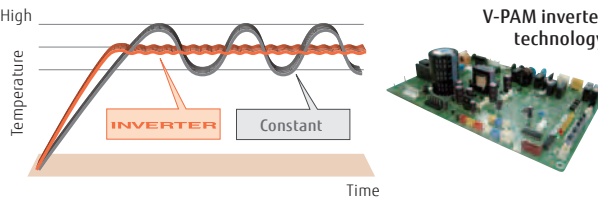
High Efficiency

For Outdoor Unit
Twin Rotary Compressor
with Linear Control Injection Port

It realizes the high condensing temperature without overheating 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 realized by controlling the injection amount according to the usage state.



Accurate temperature control
by DC inverter technology



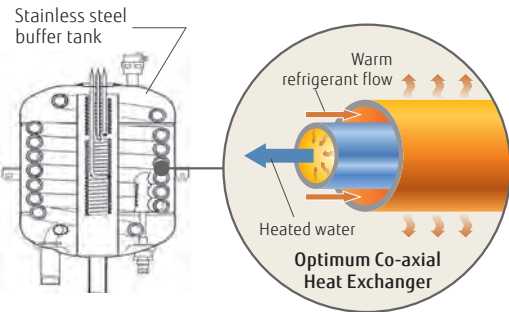
For Hydraulic Indoor Unit
Class A pump

Energy saving pump with constant volume or pressure adjustment function.



Stainless steel buffer tank

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



Easy Control



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

WATERSTAGE™ Lineup

Capacity (kW)	5	6	8	10	11	14	15	16	17
Split	NEW Super High Power series 3 phase Page 244 Hydraulic Indoor Unit/Outdoor Unit								
Split DHW integrated	High Power series Single phase Page 244 Hydraulic Indoor Unit/Outdoor Unit								
Monobloc	Compact series with hydraulic unit Page 246 Hydraulic Indoor Unit/Outdoor Unit								

*: Tentative model name

EHPA Quality Label



Fujitsu General's WATERSTAGE* have obtained the EHPA Quality Label** by tests according to the international Standards EN14511 and EN17025. The EHPA Quality Label** is a label that shows the end-consumer a quality heat pump unit on the market.

*: High Power split model

** : Check the validity of label at www.ehpa.org/QL

SG-Ready Label



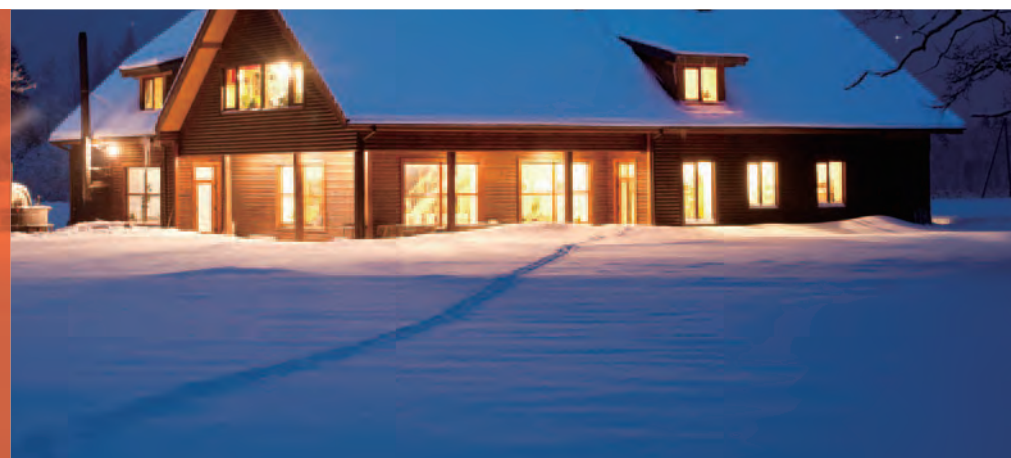
SG-Ready is a defined standard by BWP***, which makes it possible that the device can be integrated into a smart grid. Heat pumps, which are equipped with the SG-Ready Label, can receive signals from the power grid (and e.g. also from PV systems) about the available (unused renewable) energy (from wind, sun & water). Fujitsu General provides the SG-Ready compatibility to all new Heat Pumps series.

***BWP: the Federal German Heat Pump Association

Split Type

Super high power series
High power series
Comfort series

WATERSTAGE™



Super high power series

Hydraulic indoor unit:
[3phase] WSYK170xxx*
Outdoor unit:
[3phase] WOYK150LJL/WOYK170LJL

*: Tentative model name



Hydraulic indoor unit
3 Phase
Outdoor unit
3 Phase
15/17 kW

High power series

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



Hydraulic indoor unit
Single Phase/
3 Phase
Outdoor unit
Single Phase
11/14 kW
3 Phase
11/14/16 kW

Comfort series

Hydraulic indoor unit:
WSYA050DG6/WSYA100DG6
Outdoor unit:
WOYA060LFCA/WOYA080LFCA/
WOYA100LFTA



Hydraulic indoor unit
Outdoor unit
5/6/8 kW
10 kW

Split DHW Integrated Type

High power series
Comfort series

WATERSTAGE™



High power series

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



Hydraulic indoor unit
Single Phase/
3 Phase
Outdoor unit
Single Phase
11/14 kW
3 Phase
11/14/16 kW

Comfort series

Hydraulic indoor unit:
WGYA050DG6/WGYA100DG6
Outdoor unit:
WOYA060LFCA/WOYA080LFCA/WOYA100LFTA



Hydraulic indoor unit
Outdoor unit
5/6/8 kW
10 kW

High leaving water temperature

Super High power series:

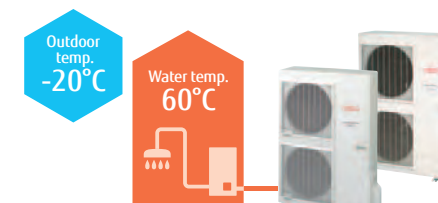
High leaving water temperature of 60°C is kept even when outdoor temperature is down to -20°C without using backup heaters. Maximum leaving water temperature is 55°C without backup heater. Hot water supply temperature can be maintained even at -22°C outdoor temperature.



Super high power series

High power series:

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



High power series

Comfort series:

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



Comfort series

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

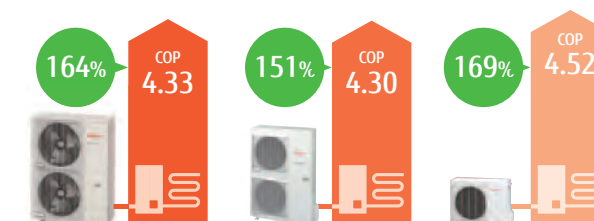
High COP

Air to water heat pumps work with much more efficiency and save more energy than a traditional heating system.

Energy efficiency class

A++

Seasonal space heating energy efficiency (η_s)

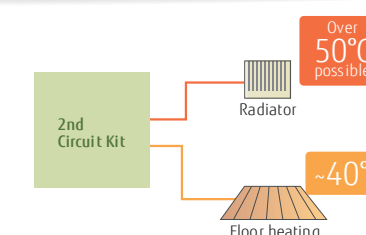


Condition : Outdoor Temp. 7°C Heating Temp. 35°C.

2 Zone individual control*

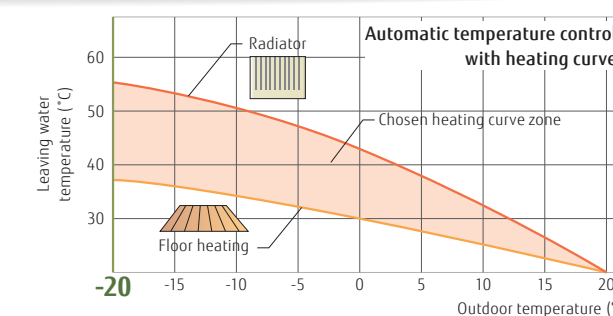
2 Zone individual control (2 under floor heating zones or under floor heating + radiator zone, etc.)*

*: Optional parts are required.



Automatic heating curve control

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



Monobloc Type

Comfort series

Compact series

Hydraulic indoor unit:

WSYP100DG6

Outdoor unit :

WPYA050LG / WPYA080LG / WPYA100LG



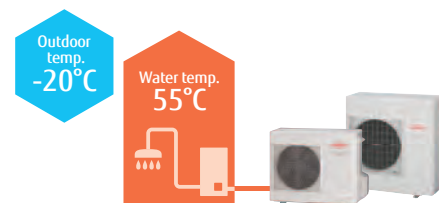
Hydraulic indoor unit

Outdoor unit 5 kW

8/10 kW

High leaving water temperature

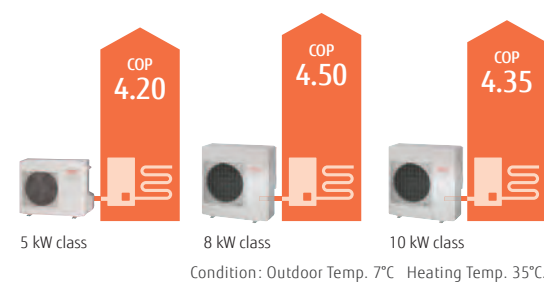
High leaving water temperature of 55°C keeps to -20°C outdoor temperature without additional heater.



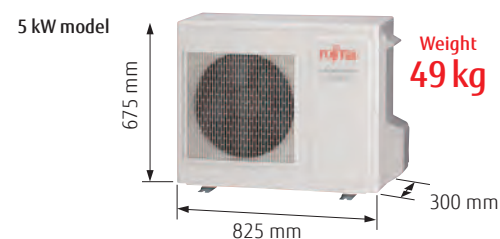
High COP

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

Energy efficiency class



Compact & light weight design



Features of the hydraulic indoor unit

- The compact Indoor unit provides two electrical back up heater, each with 3 kW capacity
- 12 L expansion vessel included
- No waste of space. DHW Kit installation inside the hydraulic unit possible.
- New generation controller. Connection by MODBUS protocol possible.
- Integrated heat metering (flow sensor included).



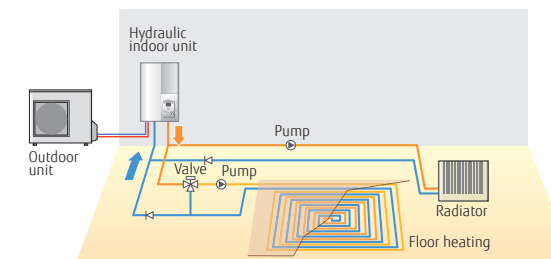
Hydraulic indoor unit

Case Studies

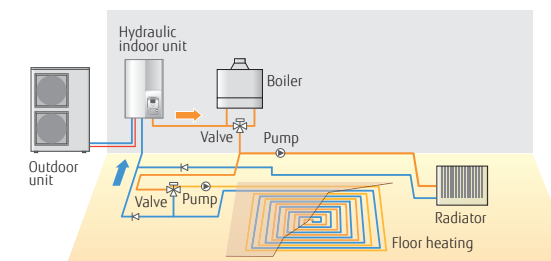
Split Type

2 emitter simultaneous heating (Individual control)

Floor heating + Radiator



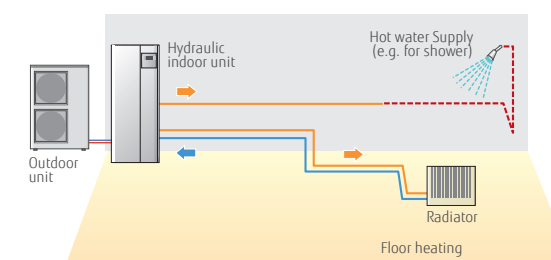
Boiler connected to heating (Boiler + Heating)



Split DHW Integrated Type

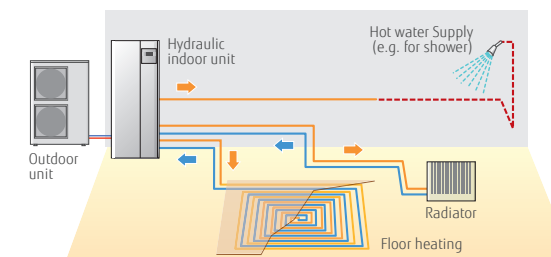
Single heating & Domestic Hot Water

Radiator + Domestic Hot Water



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

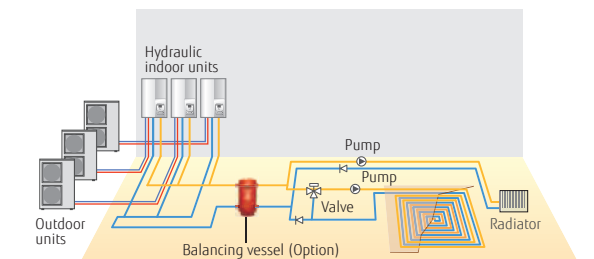
Radiator + Domestic Hot Water



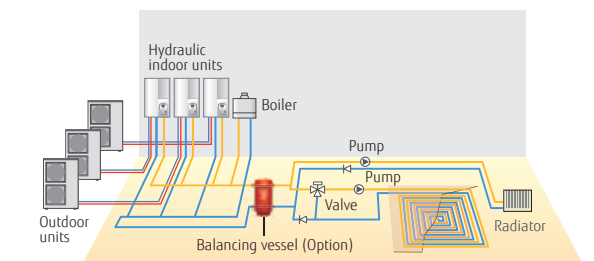
Split Cascade System

2 emitter simultaneous heating (Individual control)

Floor heating + Radiator



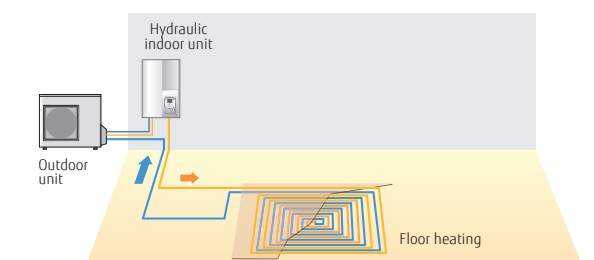
Boiler connected to heating (Boiler + Heating)



Monobloc Type

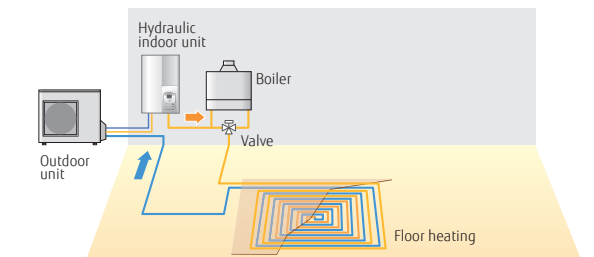
Single heating system

Floor heating
































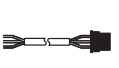
Boiler connected to heating (Boiler + Heating)

Floor heating



Optional Parts

Product Name		Model Name	Split												Split DHW integrated type												Monobloc		
			Super High Power	High Power						Comfort						High Power						Comfort							
				3Ø		1Ø		3Ø		1Ø				1Ø		3Ø				1Ø				1Ø					
				15	17	11	14	11	14	16	5	6	8	10	11	14	11	14	16	5	6	8	10	5	8	10			
2nd Circuit Kit		UTW-KZSXE	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—	—	—	—	—					
		UTW-KZDXE	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●	—	—	—	—					
Boiler Connection Kit		UTW-KBSXD	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—	—	—	—	—	—					
		UTW-KBDXD	—	—	—	—	—	—	—	—	—	—	●	●	●	●	●	●	●	●	—	—	—	—					
Balancing Vessel		UTW-TEVXA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
DHW Kit		UTW-KDWXG (Internal)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—					
		UTW-KDWXD (External)	●	●	●	●	●	●	●	●	●	●	__*1	__*1	__*1	__*1	__*1	__*1	__*1	__*1	●	●	●	●					
DHW Tank	200 Liter 300 Liter 400 Liter 	UTW-T20AXH UTW-T30AXH UTW-T40AXH	●	●	●	●	●	●	●	●	●	●	__*1	__*1	__*1	__*1	__*1	__*1	__*1	__*1	●	●	●	●					
	200 Liter 300 Liter 400 Liter 	UTW-T20BXH UTW-T30BXH UTW-T40BXH	●	●	●	●	●	●	●	●	●	●	__*1	__*1	__*1	__*1	__*1	__*1	__*1	__*1	●	●	●	●					
Circulating Pump		UTW-PHFYG	●	●	●	●	●	●	—	—	—	—	●	●	●	●	●	—	—	—	—	—	—	—					
Swimming Pool Kit		UTW-KSPXD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
Heat Exchanger for Swimming Pool Kit		UTW-ESPXA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
Cooling Kit		UTW-KCLXD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	__*2	__*2	__*2	—					
Regulation Extension Kit		UTW-KREXD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
Low Noise Kit		UTW-KLNXE	●	●	●	●	●	●	—	—	—	—	●	●	●	●	—	—	—	—	—	—	—	—					
Drain Pan		UTW-KDPXA	—	—	—	—	—	—	●	●	●	—	—	—	—	—	—	●	●	●	—	—	—	—					
Cascade Master Kit (incl. LPB Clip)		UTW-KCMXE	●	●	●	●	●	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—					
Cascade Slave Kit (incl. LPB Clip)		UTW-KCSXE	●	●	●	●	●	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—					

Product Name	Model Name	Split												Split DHW integrated type										Monobloc		
		Super High Power		High Power						Comfort				High Power						Comfort				Compact		
				3Ø		1Ø		3Ø		1Ø				1Ø		3Ø		1Ø				1Ø				
		15	17	11	14	11	14	16	5	6	8	10	11	14	11	14	16	5	6	8	10	5	8	10		
HMI Kit	 UTW-KHMXE*3	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
Remote Controller	 Wired	UTW-C74TXF*3	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
		UTW-C74HXF*3	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
	 Wireless	UTW-C78XD	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
		UTW-C78XD-E*4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
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-KMBXE	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7	—*7			
Base Heater	 UTW-HAMXE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
	 UTW-HAMXF	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
Service Tool (incl. OCI700 Adaptor)	 UTW-KSTXD	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5			
Service Tool Software	 UTW-KPSXD	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6	●*6			
External Connect Kit	 UTY-XWZXZ2	●	●	●	●	●	●	—	—	—	—	●	●	●	●	●	—	—	—	—	—	—	—			

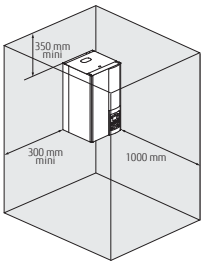
*1: DHW operation is possible without DHW Kit and DHW Tank. ● : Available — : Not Available
*2: Cooling operation is possible without cooling kit
*3: 19 Languages included, no separate Eastern European RC necessary. C74TXF: Built in Room Temperature sensor C74HXF: Built in Room temperature and Humidity sensor
*4: Eastern European Language(English, Czech Republic, Slovakia, Poland, Turkey, Hungary, Russia, Slovenia, Greece, Serbia)
*5: UTW-KL1XD is required for the connection.
*6: UTW-KW1XD or UTW-KW4XD is required for the connection.
*7: Additional optional part necessary

Installation Limitations

Equipment Installation

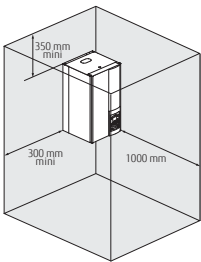
Split type Hydraulic indoor unit

- Hydraulic indoor unit is to be hang on the wall
- Weight < 65 kg (including water)
- Space for maintenance should be respected



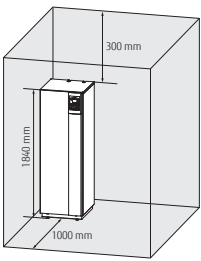
Monobloc Type Hydraulic indoor unit

- Hydraulic indoor unit is to be hang on the wall
- Weight < 62 kg (including water)
- Distances for maintenance should be respected



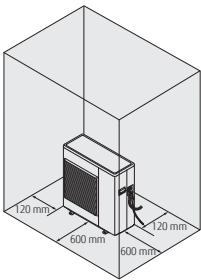
Split DHW integrated type Hydraulic indoor unit

- Floor stand
- Weight 366 kg (including water)
- Space for maintenance should be respected.



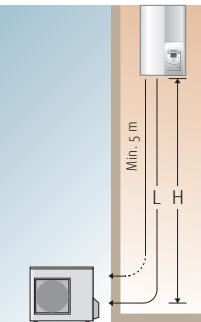
Monobloc type Outdoor unit

- Floor stand
- Weight 72 kg (without water): WPYA080LG, WPYA100LG
- 49 kg (without water): WPYA050LG
- Distances for maintenance should be kept



Piping and Wiring

Split type



Series	Capacity range(kW)	H (m)	L (m)
Comfort	5	±20	5-30
	6		
	8		
	10		
High power	11	±15	5-20
	14		
	15	±15	5-30
	16		
	17	±15	5-30

*For the outdoor unit installed below the indoor units: 25 m max. (15, 17 kW models)

Specifications & Dimensions

Split type Super high power series/High power series

Specifications

Model Name			Hydraulic indoor unit		WSYK170xxx*3		WSYK170xxx*3	
Capacity range			Outdoor unit		WOYK150LJL		WOYK170LJL	
7°C/35°C floor heating *1	Heating capacity		kW	15		17		
	Input power			15.00		17.00		
	COP			3.46		4.13		
	COP			4.33		4.12		
2°C/35°C floor heating *1	Heating capacity		kW	13.20		13.50		
	Input power			4.06		4.27		
	COP			3.25		3.16		
	COP			13.2		15.0		
-7°C/35°C floor heating*1	Heating capacity		kW	13.2		15.0		
	Input power			4.55		5.32		
	COP			2.90		2.82		
	COP							
Space heating characteristics*2								
Temperature application				°C	55	35	55	35
Energy efficiency class					A++	A++	A++	A++
Rated heat output(P _{rated})				kW	16	17	17	18
Seasonal space heating energy efficiency(η _s)				%	130	164	130	161
Annual energy consumption				kWh	9913	8606	10225	9089
Sound power level	Hydraulic indoor unit			dB(A)	—		—	
	Outdoor unit				68		67	
Hydraulic indoor unit Specification								
Power source				3 N 400 V 50 Hz				
Dimensions H×W×D				mm	—	—	—	—
Weight (Net)				kg	—	—	—	—
Water circulation				Min/Max	L/min	—	—	—
Buffer tank capacity				L	—	—	—	—
Expansion vessel capacity				L	—	—	—	—
Leaving water temperature range				Max	°C	—	—	—
Water pipe connection diameter				Flow/Return	mm	—	—	—
Backup heater				Capacity	kW	—	—	—
Outdoor unit specification								
Power source				3 N 400 V 50 Hz				
Current				Max	A	14.0	14.0	
Dimensions H × W × D				mm	1,428 × 1,080 × 480		1,428 × 1,080 × 480	
Weight (Net)				kg	138		138	
Refrigerant				Type (Global Warming Potential)	R410A (2,088)			
Additional refrigerant charge amount				Charge	kg	3.80	3.80	
					g/m	50	50	
Connection pipe	Diameter	Liquid	mm	Ø 9.52		Ø 9.52		
		Gas	mm	Ø 15.88		Ø 15.88		
	Length	Min/Max	m	5/30		5/30		
	Length(Pre-charge)		m	15		15		
Operation range	Height difference	Max	m	15		15		
	Heating	°C	-25 to 35		-25 to 35			

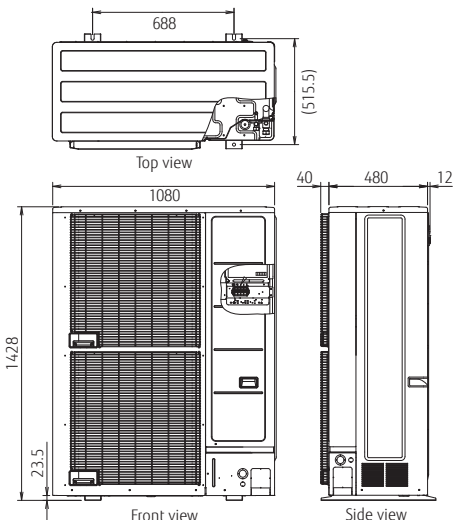
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.

*2:All information of ErP can be available for downloaded from www.fujitsu-general.com/global/products/erp-ecodesign/index.html.

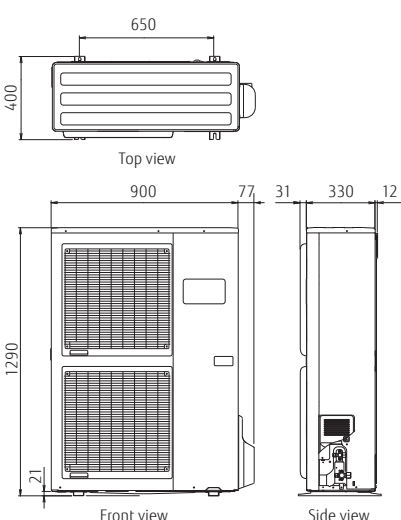
*3:Tentative model name

Dimensions

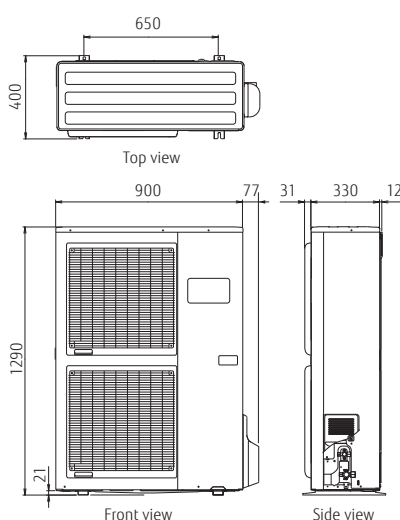
NEW Super high power series
Outdoor Unit:
WOYG150LJL/WOYG170LJL



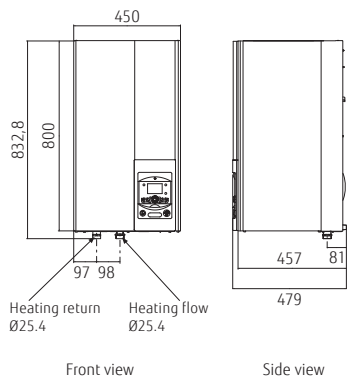
High power series
Outdoor Unit:
WOYG112LHT/WOYG140LCTA



WOYG112LHT/WOYG140LCTA



Hydraulic Indoor Unit:
WSYK170xxx*3 (Super high power series)
WSYG140DG6/WSYK160DG9 (High power series)



Specifications & Dimensions

Split type Comfort series

Specifications

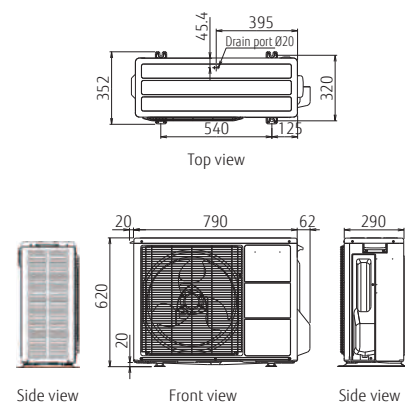
Model Name			Hydraulic indoor unit		WSYA050DG6		WSYA100DG6		WSYA100DG6		WSYA100LFTA	
			Outdoor unit		WOYA060LFCA		WOYA060LFCA		WOYA080LFCA		WOYA100LFTA	
Capacity range					5		6		8		10	
7°C/35°C floor heating *1			Heating capacity		4.50		6.00		7.50		10.00	
			Input power		0.996		1.41		1.84		2.49	
			COP		4.52		4.27		4.08		4.02	
2°C/35°C floor heating *1			Heating capacity		4.50		4.95		5.65		7.70	
			Input power		1.39		1.53		1.78		2.47	
			COP		3.24		3.24		3.17		3.12	
-7°C/35°C floor heating*1			Heating capacity		4.10		4.60		5.70		7.40	
			Input power		1.47		1.74		2.23		2.97	
			COP		2.79		2.64		2.56		2.49	
Space heating characteristics**												
Temperature application			°C		55		35		55		35	
Energy efficiency class					A+		A++		A+		A++	
Rated heat output(P _{rated})			kW		4		4		5		8	
Seasonal space heating energy efficiency(η _s)			%		115		169		118		155	
Annual energy consumption			kWh		3026		2160		3886		4415	
Sound power level			Hydraulic indoor unit		dB(A)		46		46		46	
			Outdoor unit				65		63		69	
Hydraulic indoor unit Specification												
Power source			1 Ø 230 V 50 Hz									
Dimensions H×W×D			mm		800 × 450 × 457							
Weight (Net)			kg		42							
Water circulation			Min/Max		L/min		8.1/16.2		10.8/21.7		13.5/27.1	
Buffer tank capacity			L		16							
Expansion vessel capacity			L		8							
Leaving water temperature range			Max		°C		55					
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			1 Ø 230 V 50 Hz									
Current			Max		A		11.0		12.5		17.5	
Dimensions H × W × D			mm		620 × 790 ×290							
Weight (Net)			kg		41							
Refrigerant			Type (Global Warming Potential)		R410A (2,088)							
Additional refrigerant charge amount			Charge		kg		1.10		1.40		1.80	
Connection pipe			Liquid		g/m		25				40	
			Gas		mm		Ø 6.35				Ø 9.52	
			Length		Min/Max		m		Ø 12.7		5/30	
			Length(Pre-charge)		m				15			
			Height difference		Max				20			
Operation 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.

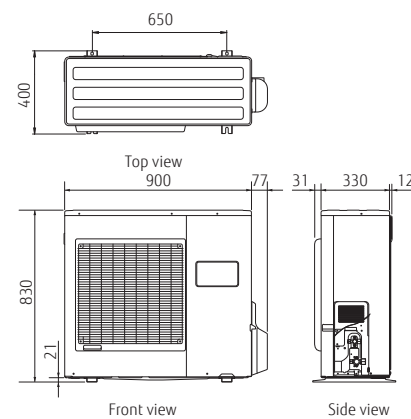
*2:All information of ErP can be available for downloaded from www.fujitsu-general.com/global/products/erp-ecodesign/index.html.

Dimensions

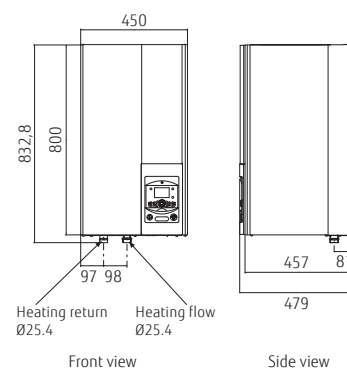
Outdoor Unit:
WOYA060LFCA/WOYA080LFCA



WOYA100LFTA



Hydraulic Indoor Unit:
WSYA050DG6/WSYA100DG6



Split DHW Integrated type High power series

Specifications

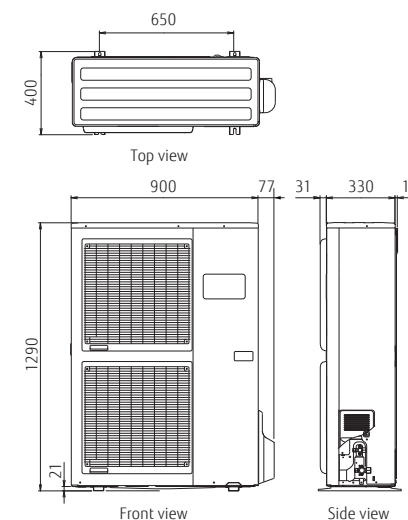
Model Name			Hydraulic indoor unit		WGYG140DG6		WGYG140DG6		WGYG160DG9		WGYG160DG9		WGYK160DG9			
Capacity range			Outdoor unit		WOYG112LHT		WOYG140LCTA		WOYK112LCTA		WOYK140LCTA		WOYK160LCTA			
7°C/35°C floor heating * ¹			Heating capacity		kW	11		14		11		14		16		
			Input power			10.80		13.50		10.80		13.50		15.17		
			COP			2.54		3.23		2.51		3.20		3.70		
2°C/35°C floor heating * ¹			Heating capacity		kW	4.25		4.18		4.30		4.22		4.10		
			Input power			10.77		12.00		10.77		13.00		13.50		
			COP			3.44		3.87		3.40		4.15		4.34		
-7°C/35°C floor heating* ¹			Heating capacity		kW	3.13		3.10		3.17		3.13		3.11		
			Input power			10.38		11.54		10.38		12.20		13.50		
			COP			4.32		5.08		4.28		5.13		5.40		
Space heating characteristics* ²																
Temperature application			°C		55		35		55		35		55		35	
Energy efficiency class					A+		A++		A+		A++		A+		A+	
Rated heat output(P _{rated})			kW		9		11		11		13		13		14	
Seasonal space heating energy efficiency(η _s)			%		112		151		113		148		112		149	
Annual energy consumption			kWh		6704		6062		8041		6824		6669		5930	
Sound power level	Hydraulic indoor unit		dB(A)	46		46		46		46		46		46		
	Outdoor unit			68		69		69		68		70		68		
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					1 Ø 230 V 50 Hz						3 N 400 V 50 Hz					
Dimensions H×W×D			mm						1,840 × 648 × 698							
Weight (Net)			kg						152							
Water circulation			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							
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					1 Ø 230 V 50 Hz						3 N 400 V 50 Hz					
Current			Max		A		22.0		25.0		8.5		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)					
Additional refrigerant charge amount			Charge		kg						2.50					
Connection pipe	Diameter		Liquid		mm						50					
	Gas						Ø 9.52				Ø 15.88					
	Length		Min/Max		m				5/20							
	Length(Pre-charge)				m				15							
Operation range			Max		m						15					
			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.

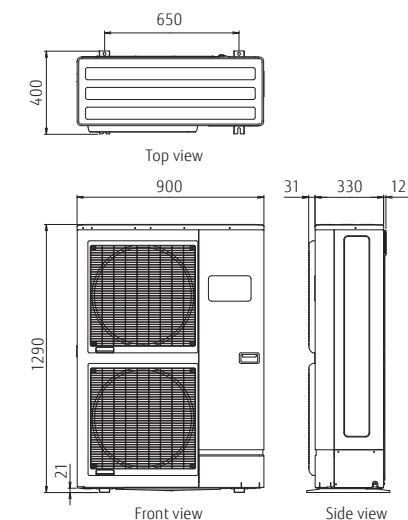
*2:All information of ErP can be available for downloaded from www.fujitsu-general.com/global/products/erp-ecodesign/index.html.

Dimensions

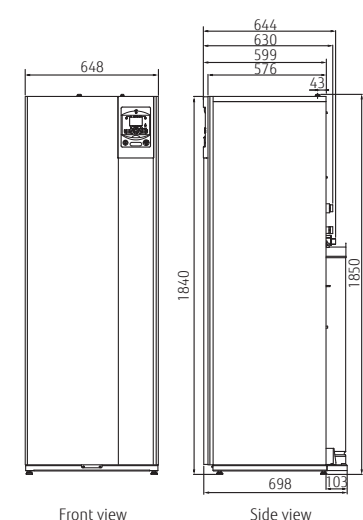
Outdoor Unit:
WOYG112LHT/WOYG140LCTA



WOYK112LCTA/WOYK140LCTA/WOYK160LCTA



Hydraulic Indoor Unit:
WGYG140DG6/WGYK160DG9



Specifications & Dimensions

Split DHW Integrated type Comfort series

Specifications: Split DHW Integrated type Comfort series

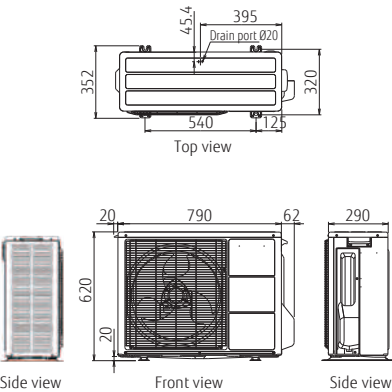
Model Name		Hydraulic indoor unit		WGYA050DG6		WGYA100DG6		WGYA100DG6		WGYA100DG6	
		Outdoor unit		WOYA060LFCA		WOYA060LFCA		WOYA080LFCA		WOYA100LFTA	
Capacity range				5		6		8		10	
7°C/35°C floor heating *1	Heating capacity	kW	4.50		6.00		7.50		10.00		
	Input power		0.996		1.41		1.84		2.49		
	COP		4.52		4.27		4.08		4.02		
2°C/35°C floor heating *1	Heating capacity	kW	4.50		4.95		5.65		7.70		
	Input power		1.39		1.53		1.78		2.47		
	COP		3.24		3.24		3.17		3.12		
-7°C/35°C floor heating*1	Heating capacity	kW	4.10		4.60		5.70		7.40		
	Input power		1.47		1.74		2.23		2.97		
	COP		2.79		2.64		2.56		2.49		
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	4	4	5	5	6	7	8	8	
Seasonal space heating energy efficiency(η _s)		%	115	169	115	169	118	156	113	155	
Annual energy consumption		kWh	3026	2160	3180	2505	3886	3375	5415	4415	
Sound power level	Hydraulic indoor unit	dB(A)	46		46		46		46		
	Outdoor unit		65	60	65	63	65	69	68	69	
Domestic hot water characteristics*2											
Load profile			L								
Energy efficiency class			A+								
Energy efficiency(η _{wh})		%	120								
Annual electricity consumption		kWh	880								
Hydraulic indoor unit Specification											
Power source			1 Ø 230 V 50 Hz								
Dimensions H×W×D		mm	1,840× 648 × 698								
Weight (Net)		kg	152								
Water circulation		L/min	8.1/16.2		10.8/21.7		13.5/27.1		18.1/36.1		
DHW capacity		L	190								
Hot water heater capacity		kW	1.5								
Expansion vessel capacity		L	12								
Leaving water temperature range		Max °C	55								
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			1 Ø 230 V 50 Hz								
Current		Max A	11.0		12.5		17.5		18.5		
Dimensions H × W × D		mm	620 × 790		×290		42		830 × 900 ×330		
Weight (Net)		kg	41				60		60		
Refrigerant		Type (Global Warming Potential)	R410A (2,088)								
Charge		kg	1.10		1.40		1.80		1.80		
Additional refrigerant charge amount		g/m	25		Ø 6.35		Ø 9.52		Ø 9.52		
Connection pipe	Diameter	Liquid mm	Ø 12.70		5/30		Ø 15.88				
		Gas mm									
	Length	Min/Max m									
Height difference	Length(Pre-charge)	m			15						
		m			20						
Operation range		Max 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.

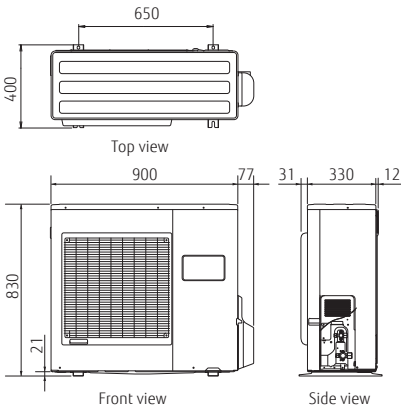
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Dimensions

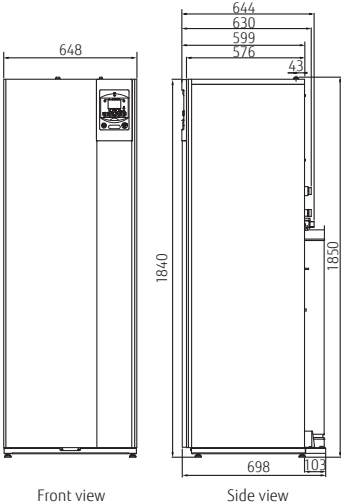
Outdoor Unit:
WOYA060LFCA/WOYA080LFCA



WOYA100LFTA



Hydraulic Indoor Unit:
WGYA050DG6/WGYA100DG6



Monobloc type

Specifications

Model Name		Hydraulic indoor unit		WSYP100DG6						
Capacity range		Outdoor unit		WPYA050LG		WPYA080LG		WPYA100LG		
				5		8		10		
7°C/35°C floor heating * ¹	Heating capacity	kW	5.00		8.00		10.00			
	Input power		1.19		1.78		2.30			
	COP		4.20		4.50		4.35			
2°C/35°C floor heating * ¹	Heating capacity	kW	3.65		4.35		4.90			
	Input power		1.07		1.23		1.44			
	COP		3.40		3.55		3.40			
-7°C/35°C floor heating* ¹	Heating capacity	kW	3.55		7.10		8.00			
	Input power		1.38		2.93		3.32			
	COP		2.57		2.42		2.41			
Space heating characteristics** ²										
Temperature application		°C	55	35	55	35	55	35		
Energy efficiency class			A+	A++	A+	A++	A+	A++		
Rated heat output (P _{rated})		kW	4	4	6	7	7	8		
Seasonal space heating energy efficiency (η _s)		%	118	171	123	168	118	167		
Annual energy consumption		kWh	3055	1952	3828	3580	4491	3700		
Sound power level		Outdoor unit	dB (A)	62	61	65		68		
Hydraulic indoor unit Specification										
Power source			1 Ø 230 V 50 Hz							
Dimensions H×W×D		mm	803 × 450 × 457							
Weight (Net)		kg	40							
Buffer tank capacity		L	22							
Expansion vessel capacity		L	12							
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			1 Ø 230 V 50 Hz							
Dimensions H × W × D		mm	675 × 825 × 300		882 × 850 × 330					
Weight (Net)		kg	49		72					
Current		Max	A		10.9		15.2		17.5	
Water circulation		Min/Max	L/min		5.0/20.0		10.0/30.0			
Water pipe connection diameter		Flow/Return	mm		Ø 19.05/Ø 19.05		Ø 25.4/Ø 25.4			
Refrigerant		Type (Global Warming Potential)	R410A (2,088)							
Charge		kg	1.05		1.72					
Leaving water temperature range		Max	°C		55					
Operation range		Heating	°C		-20 to 35					

SUPPORT

Our know-how supports you not only during the product release but also from guiding implementation to product maintenance.

Category	Information Material											Tool						
	Product Sales Training Material	Product Technical Training Material	Product news	Brochures	Feature Promotion Movie	Operating Manual	Design & Technical Manual	Certificate Data	2D CAD Data	3D CAD (Revit) Data	Installation Manual	Service Manual	WATERSTAGE™ Package label creator	Design Simulator (RAC, PAC, VRF)	WATERSTAGE™ proposer	CFD Simulation	Service Tool / Web Monitoring Tool	Mobile Technician
	●	●																
			●	●	●	●	●											
							●	●					●					
							●							●	●			
							●		●	●								
																●		
							●				●							
													●				●	●
	After sales and Service												●					

- 258 AIRSTAGE™ SUPPORT
- 260 AIRSTAGE™/RAC SUPPORT TOOL
- 262 WATERSTAGE™ SUPPORT TOOL
- 264 QUICK SERVICE & MAINTENANCE
- 266 SERVICE TOOL
- 267 WEB MONITORING TOOL

AIRSTAGE™ SUPPORT

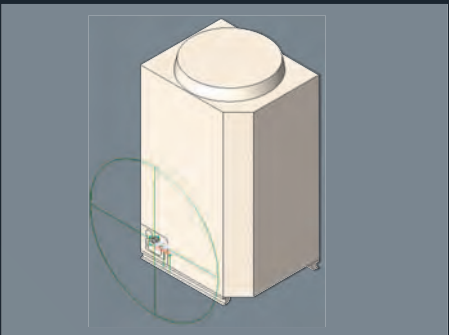
Fujitsu General provides a variety of product and technical information to engineers and consultants, and also conducts new product research and design support activities. We provide a wide range of support to maintain high quality from design to installation.



Technical information

We provide information and tools that are useful for air conditioning system design, such as unit performance data and tools that make model selection and estimation easy.

- Features**
- Design & Technical Manual
 - Model Selection & Estimation
 - Certificate Data
 - 2D/3D CAD Data



Product information

New product information is provided in the form of documents and movies for every new model released. These can be downloaded from a private section of our website. To access this website, please contact your Fujitsu representative.

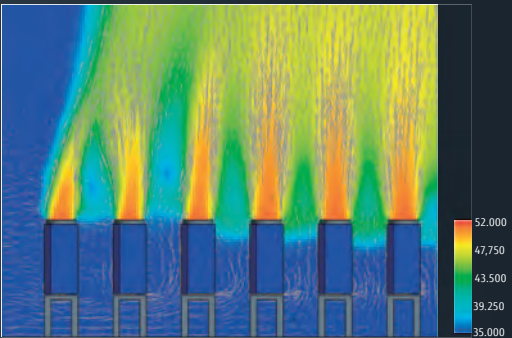
- Features**
- Product News
 - Brochures & All Manuals
 - Feature Promotion Movie



Technical support

Technical support is provided at every stage from design to installation to assist in providing the most suitable air conditioning solution.

- Features**
- CFD Simulation
 - Guide line
 - Commissioning Support



CFD Simulation



Commissioning Support

Training

Fujitsu General has many training facilities around the world that regularly conduct specialized product, technical, and service training. These research facilities also support the development of people with high technical capability.

- Features**
- Designing AIRSTAGE™ Systems
 - Control System on-site training



- 1 Head Office Training Center: Japan
- 2 China Training Center: China
- 3 Asia Training Center: Singapore
- 4 Europe Training Center: U.K.
- 5 Europe Training Center: Germany
- 6 America Training Center: U.S.A.
- 7 Middle East Training Center: UAE
- 8 Oceania Training Center: Australia

AIRSTAGE™/RAC SUPPORT TOOL

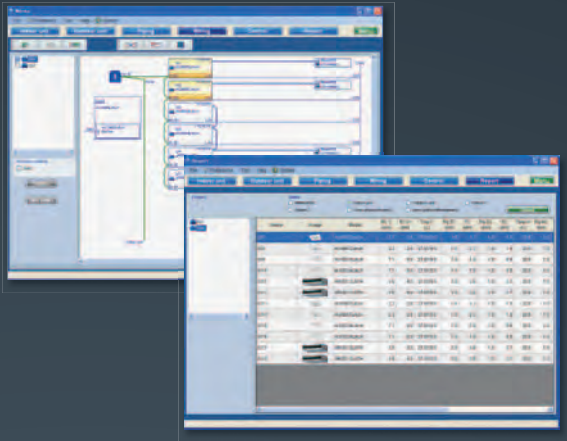
Put the charts and pens away and design your projects on your computer with ease using the Design Simulator. Everything from selecting indoor and outdoor units, allocating controls and optional parts to designing the piping and wiring systems is made easier using the program's built-in features.

Once your project is designed take advantage of the Export functions to easily get materials lists, product specifications, refrigerant calculations and more - it'll even export to Word, Excel, or Acrobat formats, and group the relevant CAD data for your project.

Design Simulator

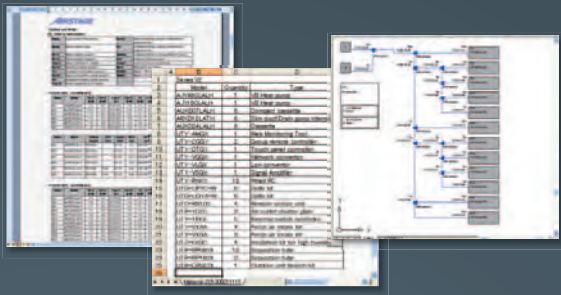
Automatically create model selection information

- Each unit can be automatically set by entering the required performance, type, and temperature conditions for each indoor unit and then dragging and dropping into the outdoor unit.
- Piping and wiring diagrams can be created automatically and it is easy to set branches, grouping, and options.
- The additional refrigerant charging amount is automatically calculated when the pipe length is entered.
- It is also easy to set the remote controller groups, central controller and converters.
- The equipment list including the equipment information is created automatically.



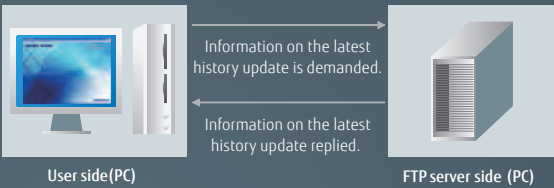
Output the format that matches the application

- The information specific to your project can be exported in a number of industry standard file formats.
- Word format (rtf)(doc)
 - Excel format (csv)
 - Acrobat format (pdf)
 - Auto CAD format (DXF)
 - 2D Data (DXF)
 - 3D Data (RFA)



Update your Design Simulator

Database can be easily updated online using AutoUpdate function through FTP.

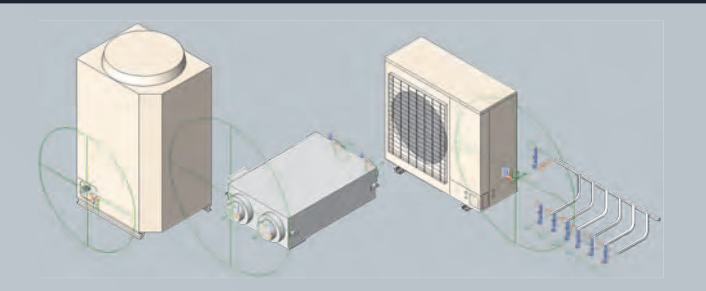


BIM Building Information Modeling

Fujitsu General provides the Building Information Modeling (BIM) object models and contents for our VRF system and some products to the architect, designer and contractor using Autodesk® Revit® technology from our Website and Autodesk® Seek Website, etc.

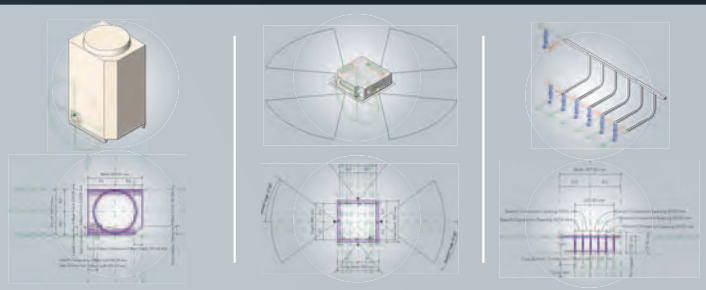
3D and 2D product data

We provide 3D data that closely resemble the actual product appearance. 2D CAD design operations are supported and 2D display is also provided. The data can also be output in other formats, such as DXF and DWG, which are used by other design CAD.



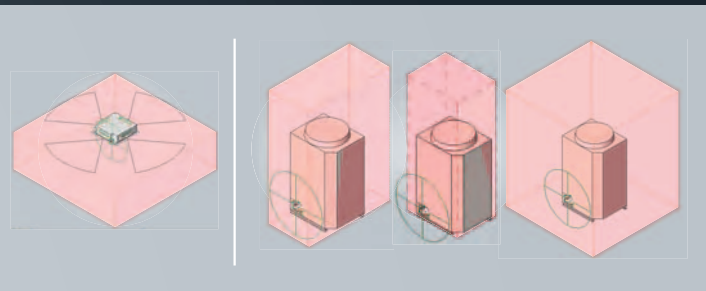
Installation limitation

The equipment installation limitation range is shown. Installation requirements, such as distance from the wall, is automatically displayed to make it easy to produce highly reliable layout designs.



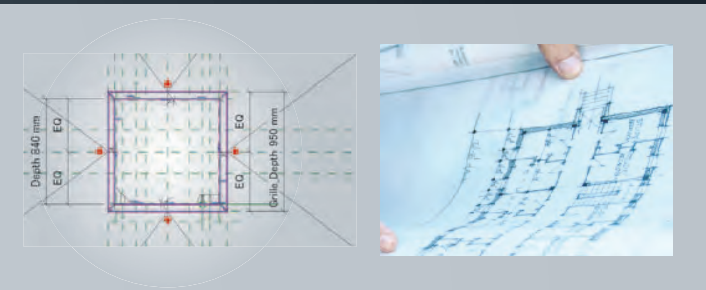
Installation information

Other information, such as symbols showing the airflow direction that are required for installation drawings, is built in and can be automatically reflected in 2D drawings. Installation drawings can be created easily.



Product specifications & link information

Contains the basic information required for air conditioner design, including unit size, capacity, input power, noise, and airflow rate. These data can be procured from the Fujitsu General Website, Design Simulator, and Autodesk® Seek Website.



WATERSTAGE™ SUPPORT TOOL

Fujitsu General's new software for the WATERSTAGE™ automatically provides a combination of WATERSTAGETM equipments just by giving few parameters. The software is featured with multiple languages, and automatic update function.

WATERSTAGE™ Proposer

Model selection with detailed technical information

- The software automatically selects the equipments just by inputting some factors, like the region where the equipment is installed, required capacity to heat up the space, and a heating method.
- The transition in the equipment capacity at each outdoor temperature condition and/or when back up heater is under operation can be easily created by this software.



The visible images of the optional items enable the correct configuration of the systems. All of the associated optional items are automatically chosen in a case the application requires several devices of the WATERSTAGE™ equipments.



The entire system configuration can be reviewed and modified once the units are selected. And by seeing the images and the list of equipments at the same time, it avoids mistake in the selection of equipments.



The software automatically provides graphs of monthly running cost, CO2 emission volume, cost comparison against other heating sources, and other data to allow the users to see at a glance the financial benefit of choosing WATERSTAGE™ equipments.

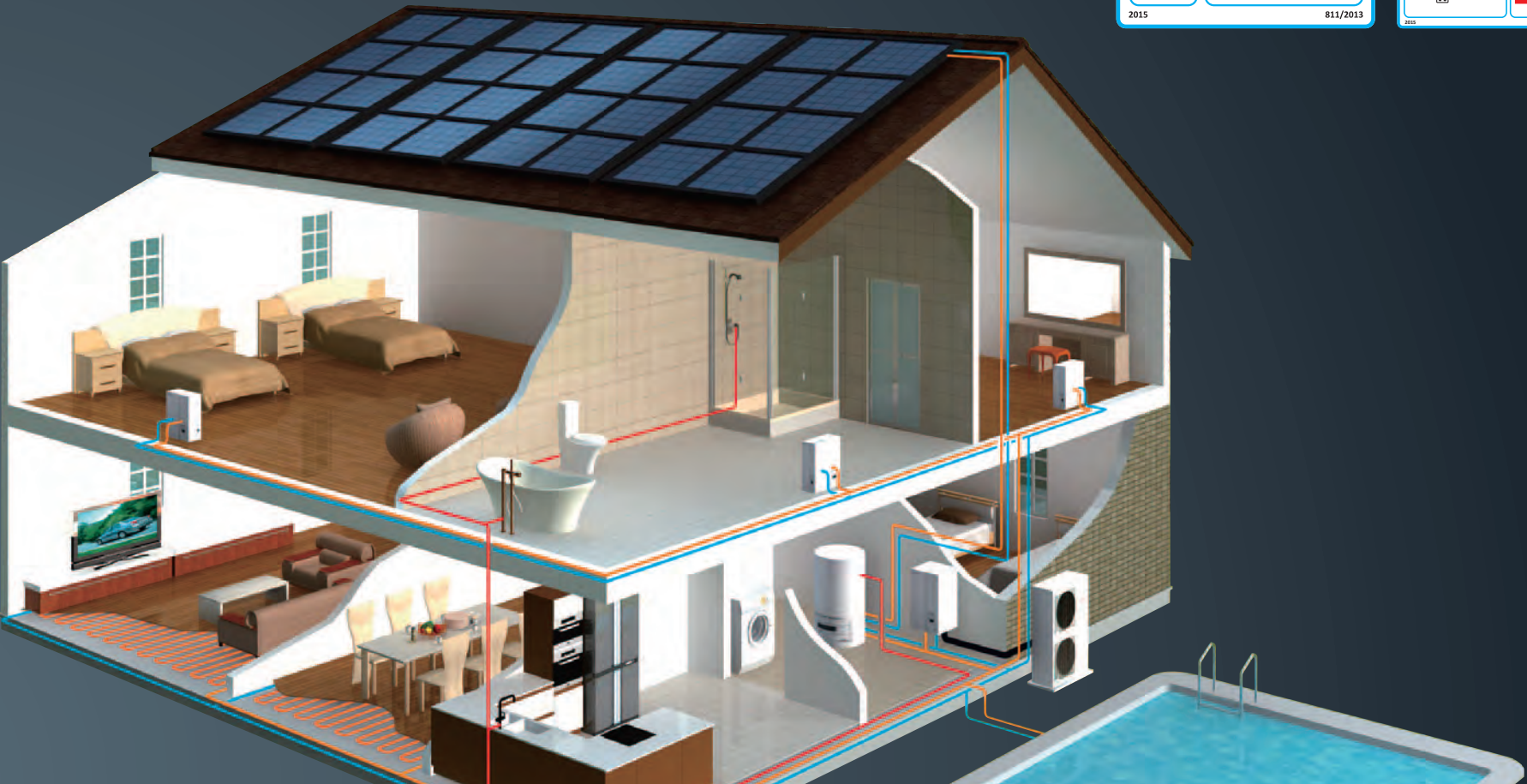
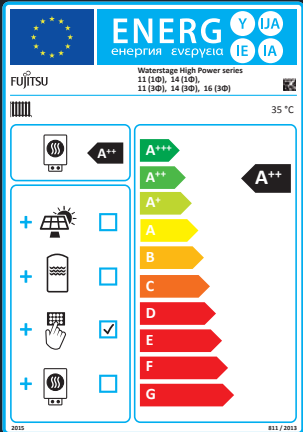
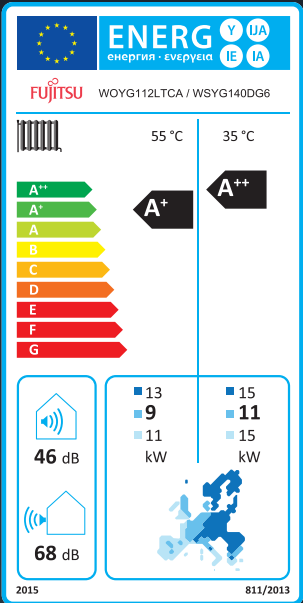


WATERSTAGE™ Package label creator

Energy labels and Fiches can be downloaded from our homepage

You can find and download the ErP documents (energy labels, product fiches, pre-configured package labels, pre-configured package fiches, information sheets and EC Declaration) from our homepage.

In addition, we will provide a internet service to allow the various package labels and package fiches to be created easily by installers in the future.



QUICK SERVICE & MAINTENANCE

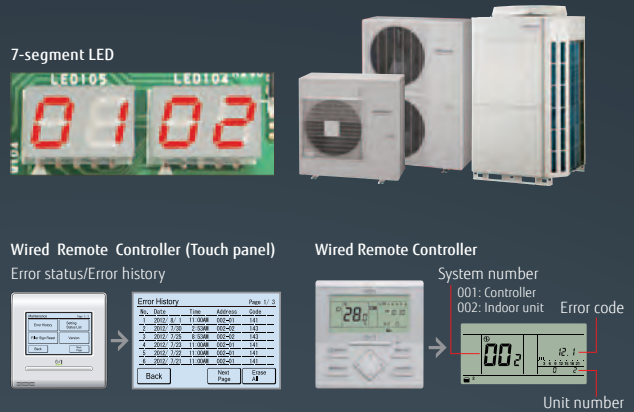
If trouble should occur in a unit or system, abundant support tools such as trouble code display at the product, Service Tool that allows checking of the detailed status of the entire system, and remote monitoring tool that uses the internet, etc. support quick service and maintenance anywhere and at any time.

Easy maintenance & monitoring

Design for easy maintenance

The air conditioner operating status and trouble status of the detailed are displayed at the 7-segment of the outdoor unit PCB or on the remote controller screen. The unit status can be checked rapidly and quick response is also possible.

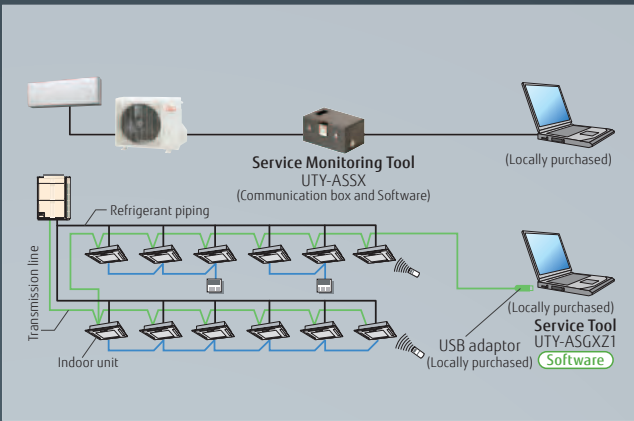
- Operation mode status
- Discharge temperature/Pressure status
- Compressor operation indication
- Address/Type/Number of outdoor unit
- Error code.



Error diagnosis by Service Tool

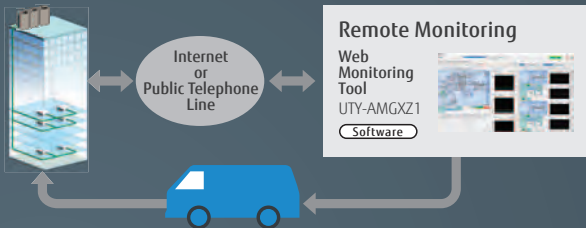
The unit status details from single split models to VRF system can be checked on PC screen by connecting Service Tool. Quick countermeasures can be taken

- Operation status/control
- Monitoring operating condition
- Monitoring sensor data
- Indication of trend graph
- Error history
- Indication of refrigerant circuit diagram (For VRF)



Remote monitoring

VRF system operating status and trouble status details can be constantly and remotely monitored over the Internet, etc. Rapid cooperation with the service personnel are also possible.



Mobile troubleshooting tool for iPhone & Android

We will release an App of troubleshooting tool for iPhone, iPod touch and other Apple products. This application is a troubleshooting tool for Fujitsu General air conditioner (RAC/PAC, VRF)

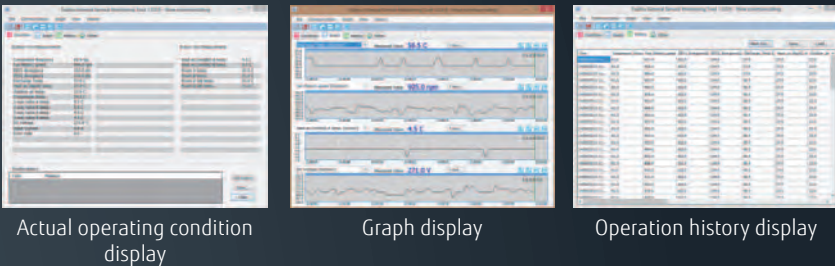
It helps you to check air conditioner condition. Error code check, Troubleshooting, and Sensor check are available.



Service Monitoring Tool (for Single Split, Multi Split & Air To Water)



- Quick overview about temperature sensor readings and controlled parts like EEV,Fan, Compressor and so on...
- it is not easy to judge the point. So it would be better to delete it.
- Visualization of protection operation
- Helpful for intermittent troubleshooting
- Proof of normal operation for the customer during periodical maintenance.



	UTY-ASSX
Dimensions (H×W×D) (mm)	60 x 160 x 160
Weight (g)	500


SERVICE TOOL


Extensive monitoring and analysis functions for installation and maintenance

- Operation status can be checked and analyzed to detect even the smallest abnormalities
 - Storage of data on system operation status on a PC allows access even from off site.
 - Up to 400 indoor units (a single VRF network system) can be controlled and monitored for large scale buildings or hotels
 - This software can be connected to any point of transmission line with USB adaptor (locally purchased)
- * The saved data can be displayed offline. However, the data saved by the following model cannot be displayed.
- UTR-YSTB/UTR-YSTC (Service Tool)
 - UTR-YMSA (Web Monitoring Tool)

Automatic operation check for refrigeration cycle

After product installation, operation check can be performed automatically. Self-diagnosis function automatically judges whether each sensor value is normal, so the operation check work can be reduced. The diagnosis can also be output as a report.






Whether each sensor value is normal is judged automatically.

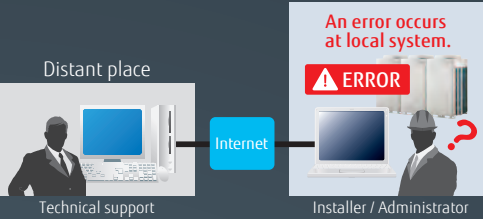
- ✓ Discharge temperature normal value **OK**
- ✓ Super heat volume normal value **OK**
- ✓ High pressure pipe normal value **OK**
- ✓ Low pressure pipe normal value **OK**
- ...etc.

[Note] Use only as a guide and judge for yourself finally.



Remote technical support & maintenance

On-site check screen can be shared with the skilled person in a distant place. When visiting for troubleshooting on site, operation status can be shared in real time and get assistance easily. Online chat function helps to support on site staff.



Various trend graph display

Previously, only 3 kinds of each sensor value can be displayed. However, multiple graphs can be displayed in new Service Tool depending on the situation. The refrigeration cycle can be checked in detail.



Personal computer system requirements

	UTY-ASGXZ1
Operating system	<ul style="list-style-type: none">• Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1• Microsoft® Windows® 8.1 Pro (32-bit or 64-bit)• Microsoft® Windows® 10 Pro (32-bit or 64-bit)
CPU	1 GHz or higher
Memory	<ul style="list-style-type: none">• 1 GB or more (for Windows® 7 [32-bit], Windows® 8.1 [32-bit], and Windows® 10 [32-bit])• 2 GB or more (for Windows® 7 [64-bit], Windows® 8.1 [64-bit], and Windows® 10 [64-bit])
HDD	40 GB or more of free space
Display	1366 x 768 or higher resolution
Interface	<ul style="list-style-type: none">• USB port for U10 USB Network Interface and Software protection key
Software	Internet Explorer® 11 or Microsoft Edge

<Packing list>

Name and shape	Quantity	Application
WHITE-USB-KEY (Software protection key)	1	Software protection key to be connected to USB port on the Service Tool-installed PC. These products run only on a PC with WibuKey.

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

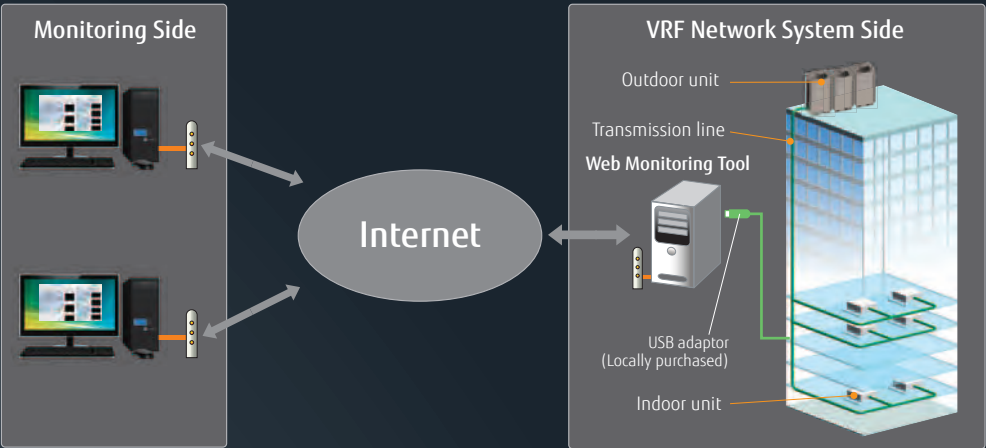
WEB MONITORING TOOL

Product features

- Troubleshooting is performed by monitoring each air conditioning unit remotely during periodical system checks.
- Error notification can be automatically transmitted to several locations using the internet*1.
- Requires either a dedicated internet connection or public telephone line.
- Determination of an error occurrence can be made through error warnings and equipment status information obtained from a remote location.
- The monitoring data in a remote side can be optionally downloaded. And, this data can be displayed in offline mode of the service tool.
- Monitoring side computer is not required to install special software, requires only general web browser.

*1: Use of internet mail system required.

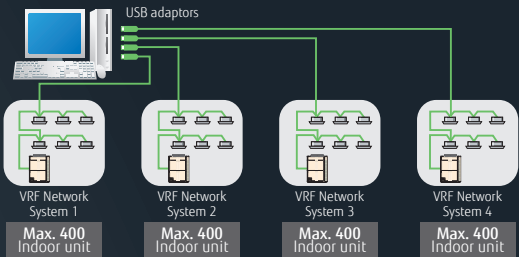
Web Monitoring System



Support 4 VRF network systems

USB adaptor (max. 4 adaptors per PC) permit, monitoring of up to 1,600 indoor units.

Suitable for large-scale buildings or hotels.



Personal computer system requirements

	UTY-AMGXZ1
Operating system	<ul style="list-style-type: none">• Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1• Microsoft® Windows® 8.1 Pro (32-bit or 64-bit)• Microsoft® Windows® 10 Pro (32-bit or 64-bit)
CPU	1 GHz or higher
Memory	<ul style="list-style-type: none">• 1 GB or more (for Windows® 7 [32-bit], Windows® 8.1 [32-bit], and Windows® 10 [32-bit])• 2 GB or more (for Windows® 7 [64-bit], Windows® 8.1 [64-bit], and Windows® 10 [64-bit])
HDD	40 GB or more of free space
Display	1366 x 768 or higher resolution
Interface	<ul style="list-style-type: none">• USB port (for 10 USB Network Interface Max.4, Software protection key)• Either of the following interface is required for remote connection:<ul style="list-style-type: none">- Public Telephone Line: Modem is required- Internet using LAN: Ethernet port is required
Software	Internet Explorer® 11 or Microsoft Edge

<Packing list>

Name and shape	Quantity	Application
WHITE-USB-KEY (Software protection key)	1	Software protection key to be connected to USB port on the Service Tool-installed PC. These products run only on a PC with WibuKey.

- Personal computer that satisfies the following system requirements
- Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)