

FUJITSU



WATERSTAGE™

Innovative Solution of Domestic Heating

S

SPLIT TYPE

M

MONOBLOC TYPE

FUJITSU GENERAL LIMITED

WATERSTAGE™

Fujitsu General "Waterstage" heat pumps are very efficient, regenerative and varied central heating systems, which absorb the energy mainly from the air.

21 Models

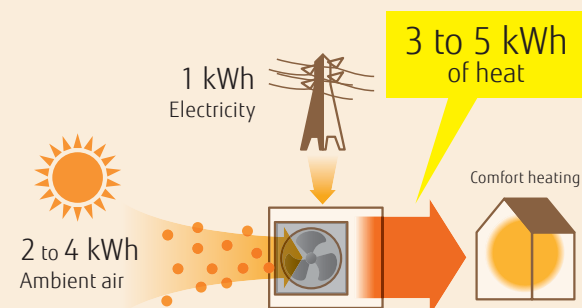


INDEX

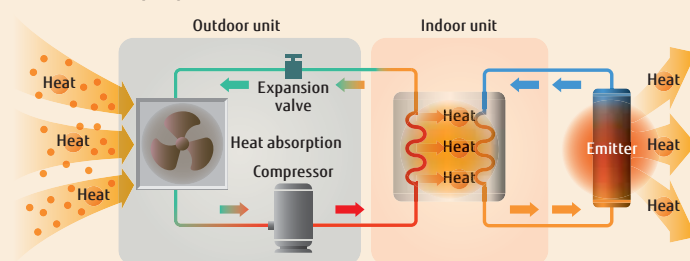
- 04 OVERVIEW
- 08 USAGE INTRODUCTION
- 14 PRODUCT TECHNOLOGY & FEATURES
- 20 PRODUCT LINEUP
 - SPLIT TYPE
 - MONOBLOC TYPE
- 28 SYSTEM CONFIGURATION & OPTIONAL PARTS
- 38 OTHERS
 - SIMPLE INSTALLATION & MAINTENANCE
 - INSTALLATION INFORMATION
 - SPECIFICATIONS & DIMENSIONS
 - MODEL SELECTION SOFTWARE

What's a Heat Pump ?

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

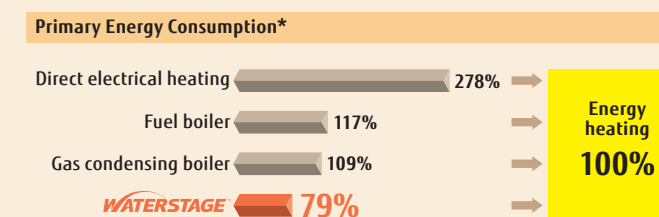


Heat Pump system framework



Primary Energy Usage Reduced Drastically!

Proportion of primary energy into heating energy of 100%



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

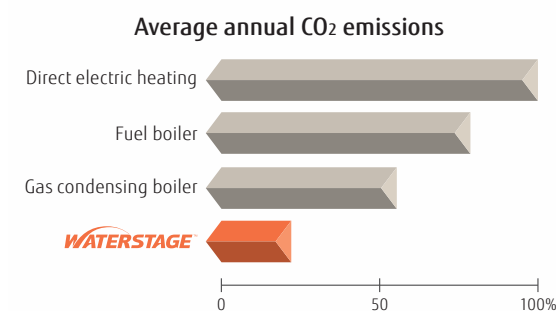
OVERVIEW

Advantage
Wide Comfort
Energy Efficiency standard

Advantage

Less
CO₂ Emissions

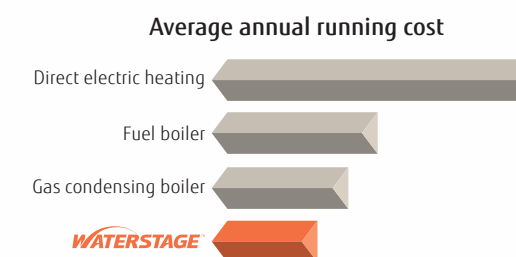
This environmentally-friendly system substantially reduces CO₂ emissions compared to conventional gas and hydro carbons combustion.



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.



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

Clean
and Healthy

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



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



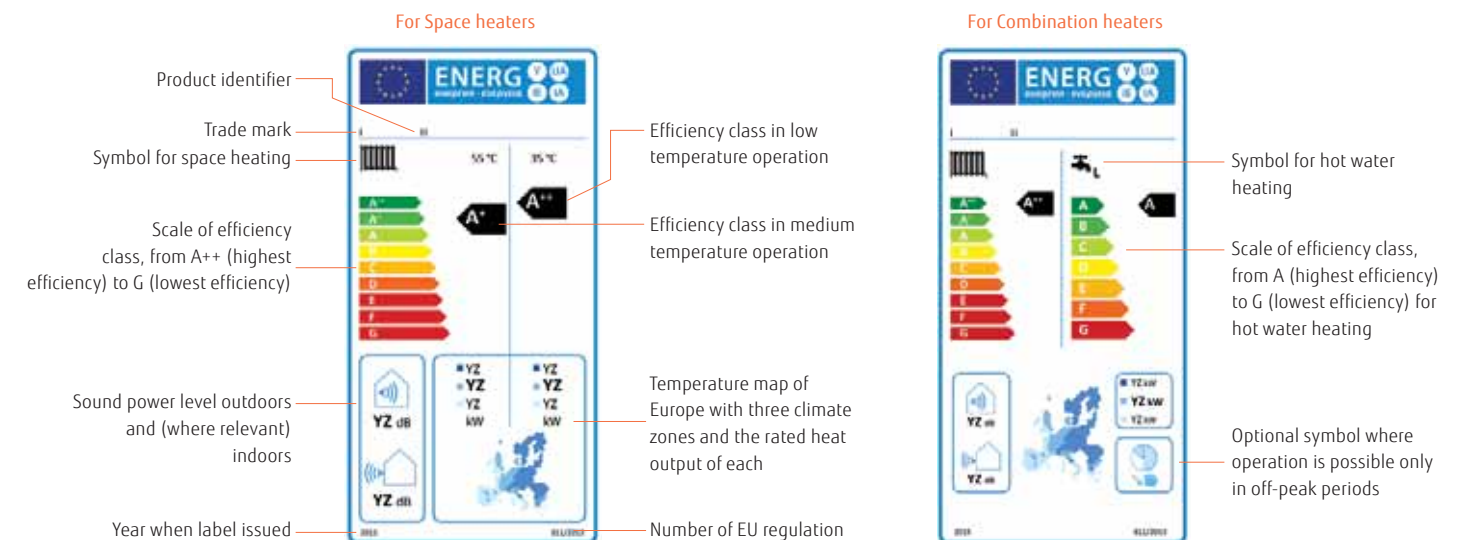
Wide Comfort

The clean energy delivers "comfort" to all spaces in the home up to the living room, bedrooms, bath and swimming pool.



Energy Efficiency standard

Product labels



The Ecodesign Directive Lot1 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* 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.

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

The Energy Labelling Directive (EU) No 811/2013

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 G (A+++ to D from 2019). 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+++ $\eta_s \geq 150$	$\eta_s \geq 175$
A++ $125 \leq \eta_s < 150$	$150 \leq \eta_s < 175$
A+ $98 \leq \eta_s < 125$	$123 \leq \eta_s < 150$
A $90 \leq \eta_s < 98$	$115 \leq \eta_s < 123$
B $82 \leq \eta_s < 90$	$107 \leq \eta_s < 115$
C $75 \leq \eta_s < 82$	$100 \leq \eta_s < 107$
D $36 \leq \eta_s < 75$	$61 \leq \eta_s < 100$
E $34 \leq \eta_s < 36$	$59 \leq \eta_s < 61$
F $30 \leq \eta_s < 34$	$55 \leq \eta_s < 59$
G $\eta_s < 30$	$\eta_s < 55$

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 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

USAGE INTRODUCTION

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



Outdoor
temperature
-25°C

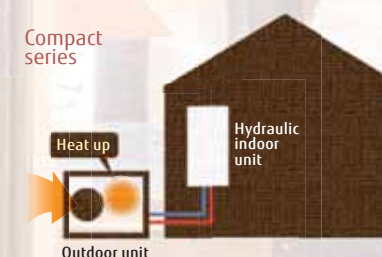
Cold district

Outdoor
temperature
-20°C

Split type with separate outdoor unit and hydraulic indoor unit
For details, see page 10-11, 24-27



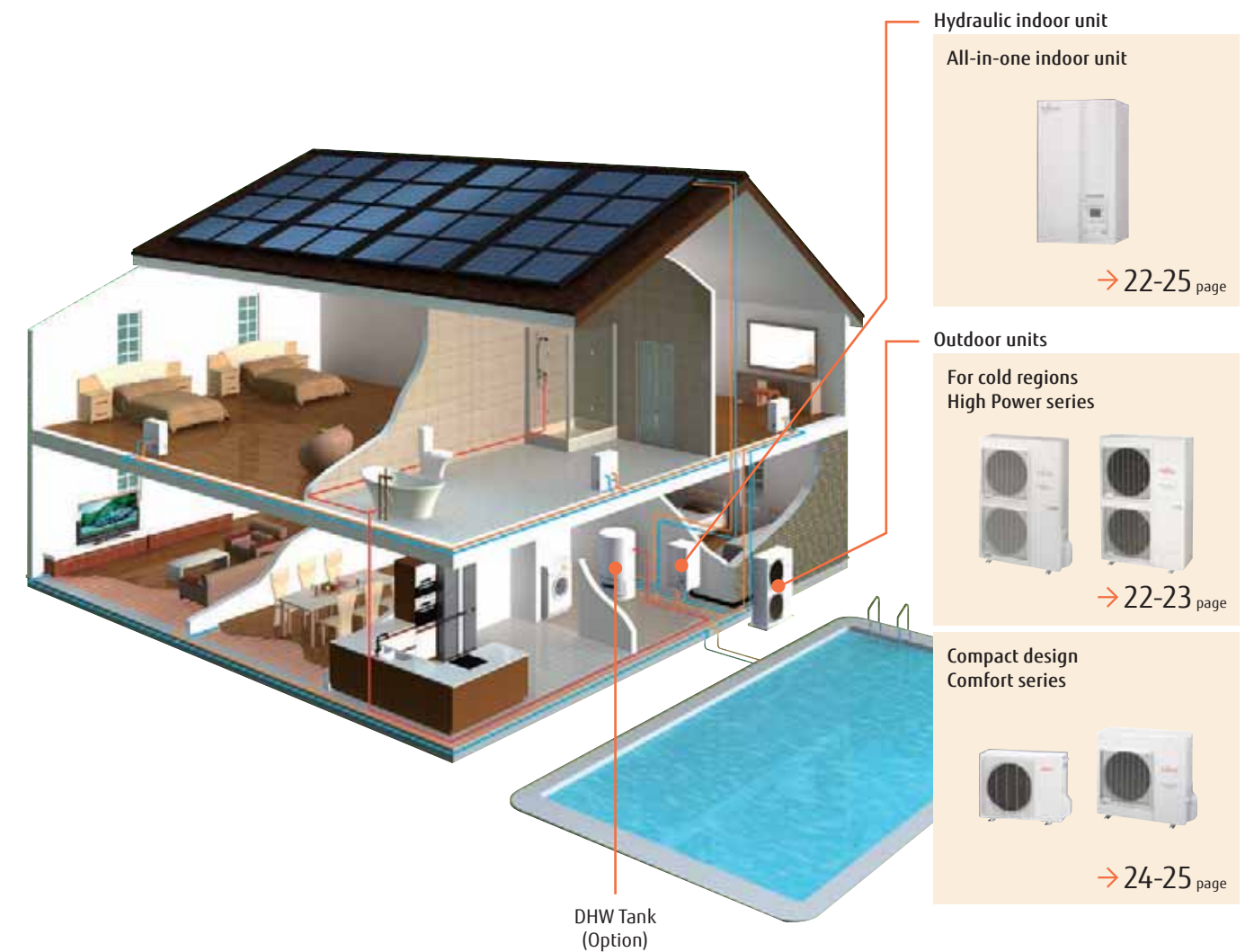
All-in-one type without refrigerant piping work
For details, see page 14-15, 32-33



S

SPLIT TYPE

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.

+ Boiler

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

+ DHW Tank

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



M

MONOBLOC TYPE

Simple setting

Room heating
& Domestic hot water



Outdoor units

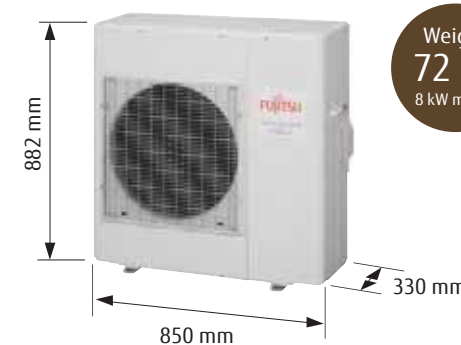
All in one model



→ 26-27 page

- 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.

Compact Design



+ Boiler

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

+ DHW Tank

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



300 Liter



PRODUCT TECHNOLOGY & FEATURES

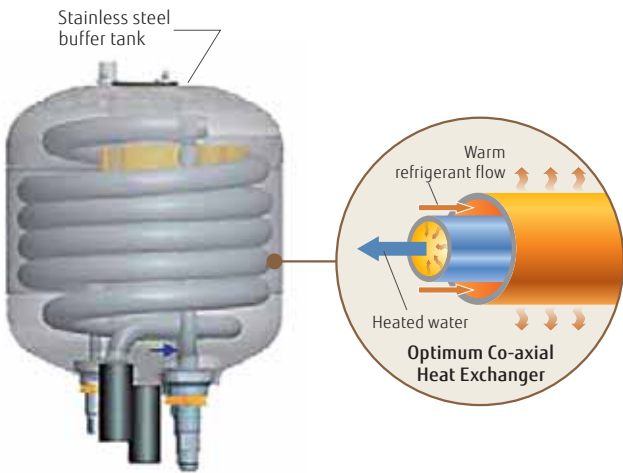


Twin Rotary Compressor



High Durability Co-axial Heat Exchanger

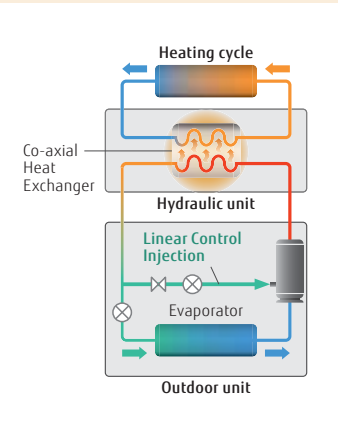
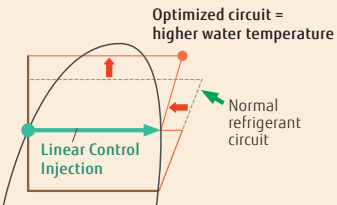
- Corrosion protected
- No flow switch necessary
- Anti-freeze-protection is unnecessary



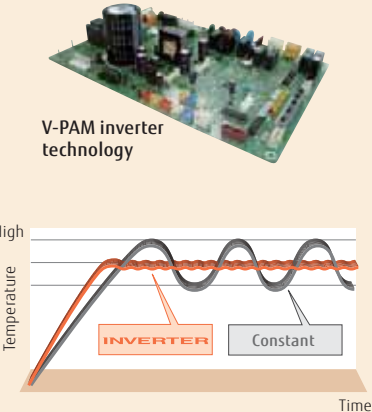
Product technology for Outdoor Unit

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



Product technology for Hydraulic Indoor Unit

High Efficiency Class A Pump

Energy saving pump with constant volume or pressure adjustment function.



Easy Control Hydraulic Indoor Unit Controller 4 Heating mode

- Automatic mode**
Comfort/Reduce mode switching automatically according to time program
- Reduce mode**
Constant reduce temperature
- Comfort mode**
Constant comfort temperature
- Protection mode**
Stand-by mode with anti-frost protection



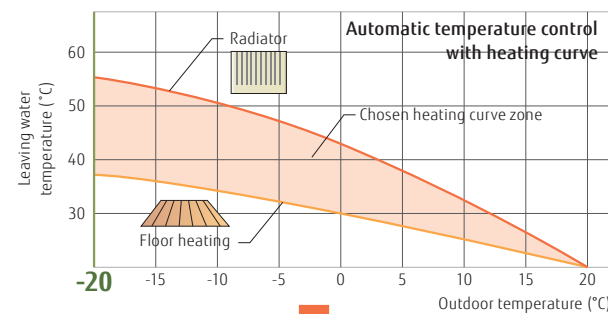
Comfort Control

A program adjusts the hot water temperature automatically in advance based on the outdoor temperature, so hot water temperature can be controlled so that setting temperature is maintained constantly.



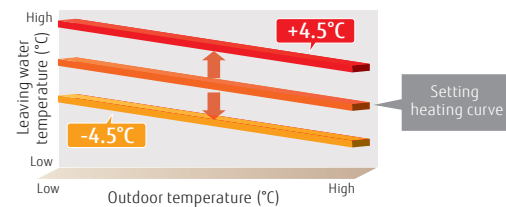
Automatic heating curve operation

Automatic heating curve control based on outdoor temp and setting room 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

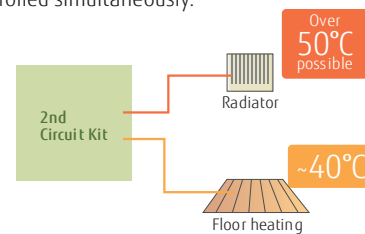
Maintaining the room temperature during defrost operation by boost start operation

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.

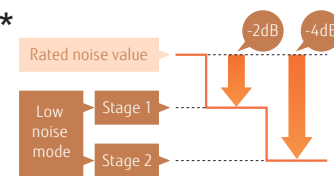
2 Zone Individual Control*

Even if hot water temperature is different in 2 heating systems, they can be controlled simultaneously.



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 operates 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*

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

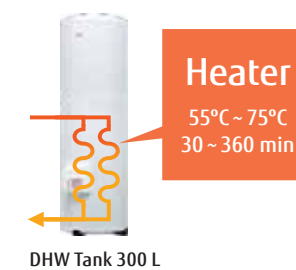
Mode	The ratio of suppressing the power consumption
1	100%
2	75%
3	50%
4	Almost 0%



Safety Function

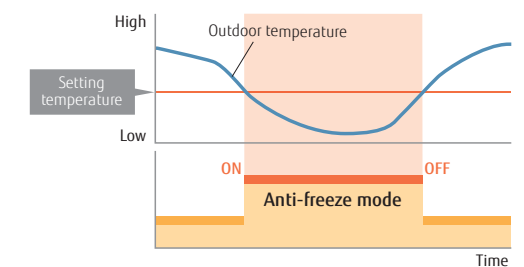
Anti-legionella function

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



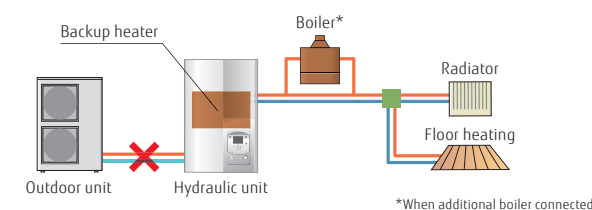
Anti-freeze function

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



Emergency operation

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



Error/Maintenance alarm

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











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



*: Optional parts are required.



Type	S SPLIT TYPE		M MONOBLOCK TYPE	
	High Power series		Comfort series	Compact series
Hydraulic indoor unit	<div>Usable outdoor temperature: -25°C</div> 		<div>Usable outdoor temperature: -20°C</div> 	<div>Usable outdoor temperature: -20°C</div> 
Outdoor unit	 		 	
Capacity range:	11/14 kW 11/14/16 kW		5/6/8 kW 10 kW	8/10 kW
System	<ul style="list-style-type: none">• 60°C hot water supply even at -20°C outdoor temperature• Different heating system can be used. Like floor heating, radiators and others.*• Heating and DHW in one system.*• Additional electric heater for backup provided.• Up to two independent control circuits.*• Solar connection for hot water production.*• Cascade connection up to three systems.*• Cooling operation is possible.* <div>Check the validity of label at www.ehpa.org/QL</div>  		<ul style="list-style-type: none">• 55°C hot water supply even at -10°C outdoor temperature• Different heating system can be used. Like floor heating, radiators and others.*• Heating and DHW in one system.*• Additional electric heater for backup provided.• Up to two independent control circuits.*• Solar connection for hot water production.*• Cascade connection up to three systems.*• Cooling operation is possible.*  	
Power source	1Ø 230 V/50 Hz 3Ø 400 V/50 Hz		1Ø 230 V/50 Hz 1Ø 230 V/50 Hz	
Capacity range	5 kW		■	
	6 kW		■	
	8 kW		■ ■	
	10 kW		■ ■	
	11 kW	■		
	14 kW	■		
	16 kW	■		

*Optional parts are required.

PRODUCT LINEUP

S

SPLIT TYPE



High Power series

High Power models realizes high heating capacity and high efficiency by newly developed "Linear Control Injection Technology" and "Co-axial Heat Exchanger". These properties are the key for a reliable heating operation throughout the whole year- even in a strong winter.

FEATURES

Comfort Control

- Automatic heating curve operation
- Auto-changeover
- Cooling operation
- Quick recovery from defrost operation
- Backup heater operation

Energy Saving

- Programmable timer

Safety Function

- Anti-legionella function
- Anti-freeze function
- Emergency operation
- Error/Maintenance alarm

Single Phase power supply

11 kW 14 kW



Outdoor unit
WOYG112LCTA
WOYG140LCTA



Hydraulic indoor unit
WSYG140DG6

3 Phase power supply

11 kW 14 kW 16 kW



Outdoor unit
WOYK112LCTA
WOYK140LCTA
WOYK160LCTA

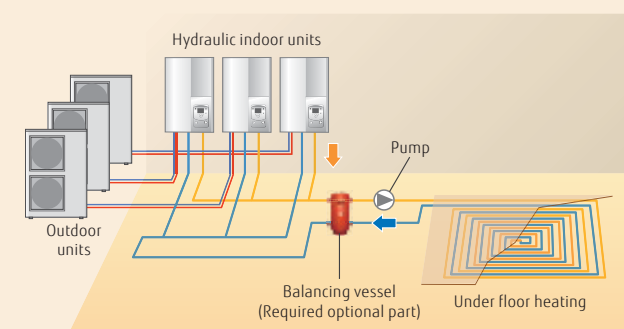


Hydraulic indoor unit
WSYK160DG9



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

Cascade connection



Powerful Heating

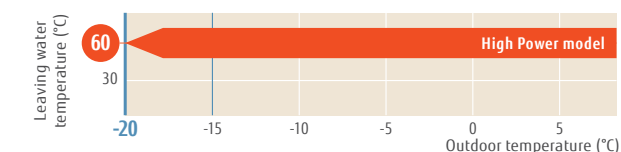
High Power models realize high leaving water temperature and high heating capacity even at low ambient temperature by newly developed "Linear Control Injection Technology". It is possible to provide high water temperature and warm rooms in cold regions.

High Leaving Water Temperature

No backup heater*

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

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

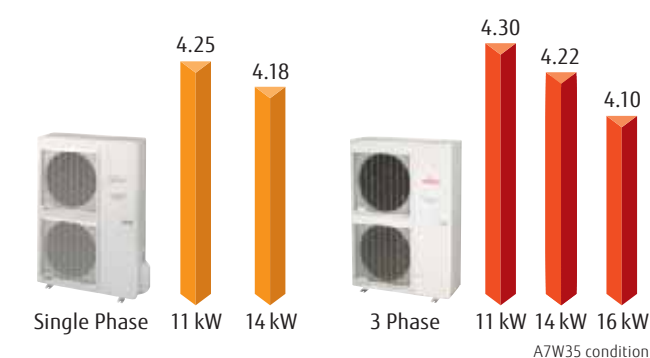


Extended Operation Range Down to -25°C

Improved operation range down to -25°C outdoor temperature

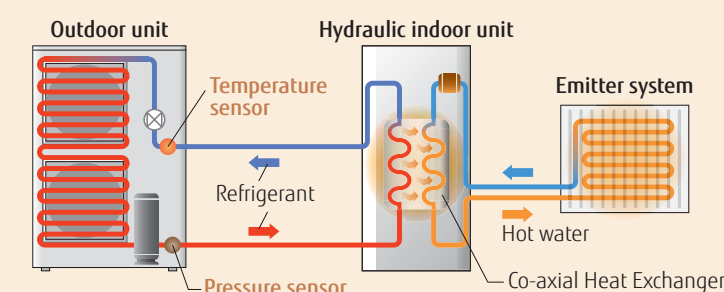
High COP

Energy efficiency is improved by the linear Control Injection Technology and the optimization of refrigerant cycle control. High Power model realizes high performance and high efficiency by adopting twin sensors and control technology corresponding to hot water heating.



Optimization of refrigerant cycle operation

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



PRODUCT LINEUP

S

SPLIT TYPE



Comfort series

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

FEATURES

Comfort Control

- Automatic heating curve operation
- Auto-changeover
- Cooling operation
- Quick recovery from defrost operation
- Backup heater operation

Energy Saving

- Programmable timer

Safety Function

- Anti-legionella function
- Anti-freeze function
- Emergency operation
- Error/Maintenance alarm

5 kW 6 kW 8 kW



Hydraulic indoor unit
WSYA050DG6
WSYA100DG6



Outdoor unit
WOYA060LFCA
WOYA080LFCA

10 kW

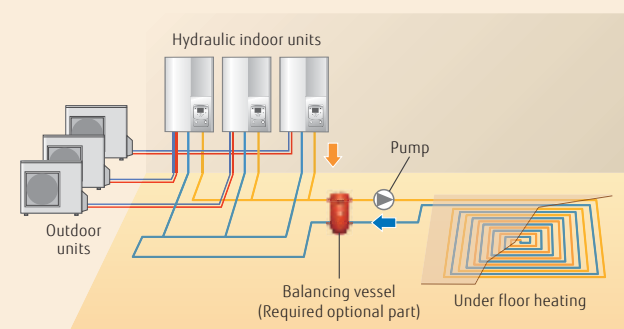


Outdoor unit
WOYA100LFTA



Hydraulic indoor unit
WSYA100DG6

Cascade connection (10 kw model)



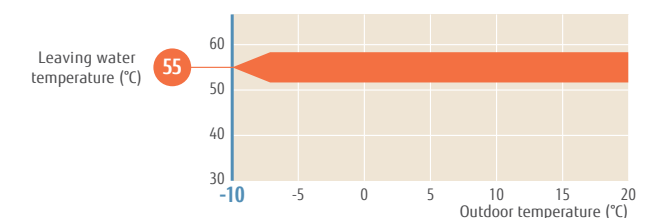
Heated up Comfortably

Comfort models realize high efficient operation by compact design suited for European environment. Hot water temperature can be controlled finely by All DC control and comfortable space heating and domestic hot water are provided.

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.

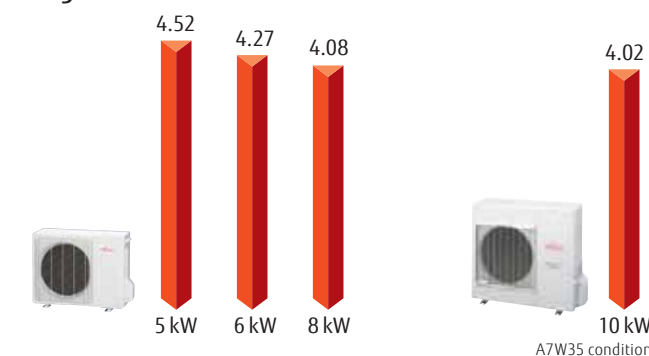
* If you want to raise the hot water supply temperature, backup heater can be used for the auxiliary operation.



Wide Operation Range

Improved operation range down to -20°C outdoor temperature

High COP



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.

PRODUCT LINEUP

M

MONOBLOC TYPE



Compact series

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

FEATURES

Comfort Control

- Automatic heating curve operation
- Auto-changeover
- Cooling operation
- Quick recovery from defrost operation
- Backup heater operation

Energy Saving

- Programmable timer

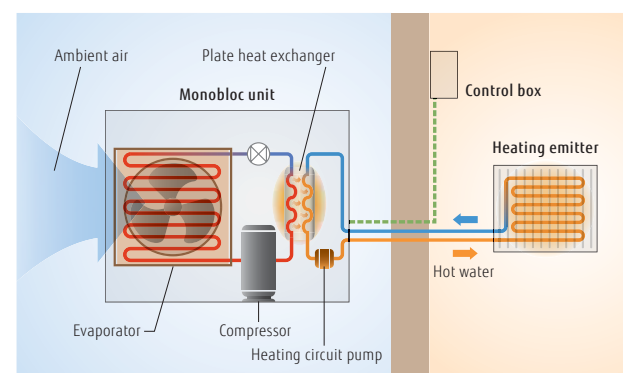
Safety Function

- Anti-legionella function
- Anti-freeze function
- Emergency operation
- Error/Maintenance alarm



Easy installation & maintenance!

All-in-One Model



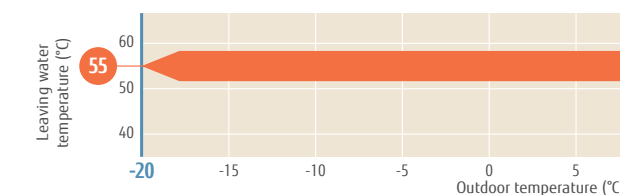
High Performance

High Leaving Water Temperature

No backup heater*

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

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



Control box



Wide Operation Range

Improved operation range down to -20°C outdoor temperature

High COP 4.50 (8 kW model)

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

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.



Compact Design

Weight 72 kg
8 kW model



High Efficient Plate Heat Exchanger

Very compact size achieved by a thin high-efficiency heat exchanger



SYSTEM CONFIGURATION & OPTIONAL PARTS

Control
System Configuration
Optional Parts

Control

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

Individual Controller

Wired Remote Control (option)



Room Thermostat
UTW-C55XA



Remote Control
UTW-C74TXF*1
UTW-C74HXF*1

Wireless Remote Control (option)



Room Thermostat
UTW-C58XD



Remote Control
UTW-C78XD

or



RF Module
UTW-MRCXD

*1: 19 Languages included, no separate Eastern European RC necessary

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

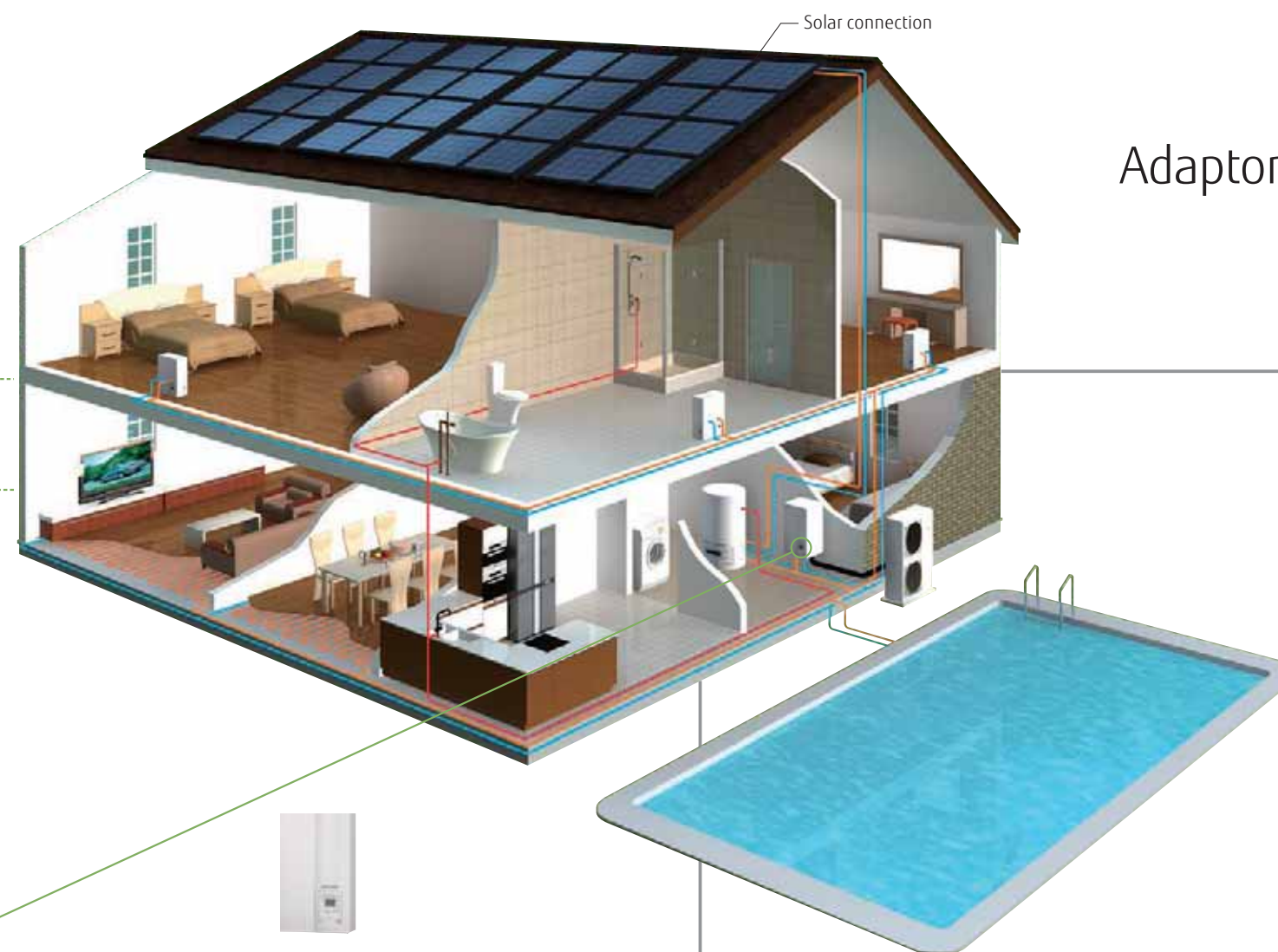
Navigation and setting

- Selecting the heating menu
- Setting program timer



HMI Kit (option)
UTW-KHMXE

Corresponding to multi languages



Adaptor for external device

Web server (option)

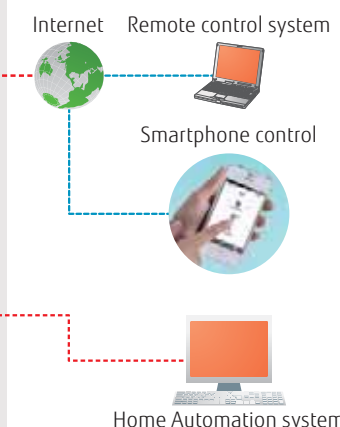


UTW-KW1XD
UTW-KW4XD

Modbus clip (option)



UTW-KMBXE



Service & Maintenance Tool

Web server (option)



UTW-KW1XD
UTW-KW4XD

LPB clip (option)



UTW-KL1XD

Service Tool (option)



UTW-KPSXD*2
Software

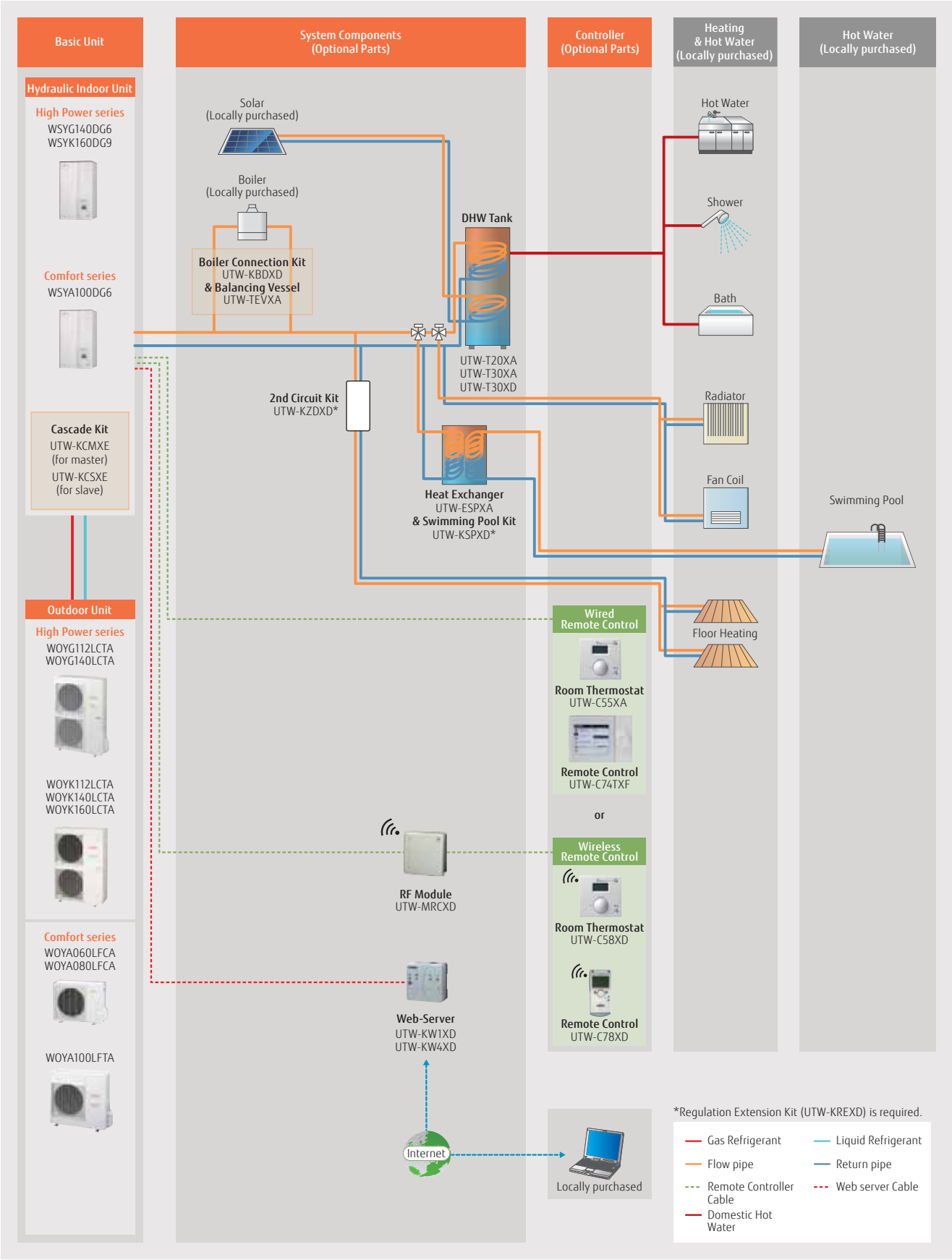


UTW-KPSXD*3

*2: UTW-KW1XD or UTW-KW4XD is required for the connection.

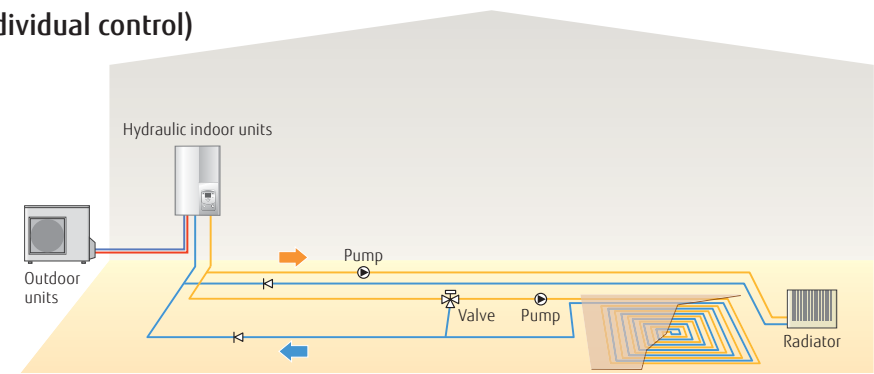
*3: UTW-KL1XD is required for the connection.

System Configuration

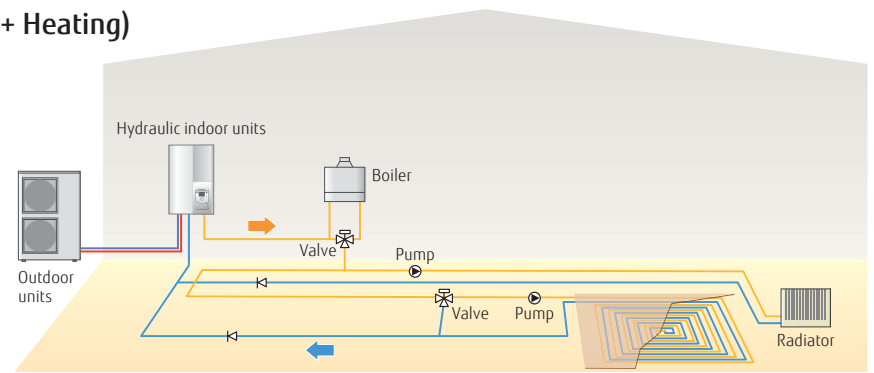


System Case Studies

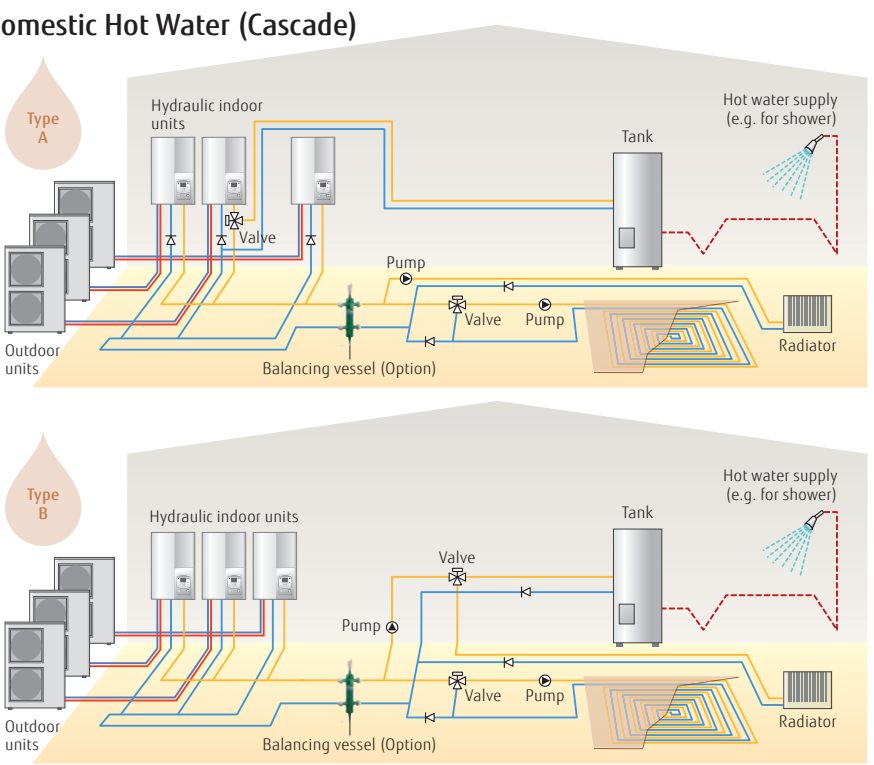
2 emitter simultaneous heating (Individual control)



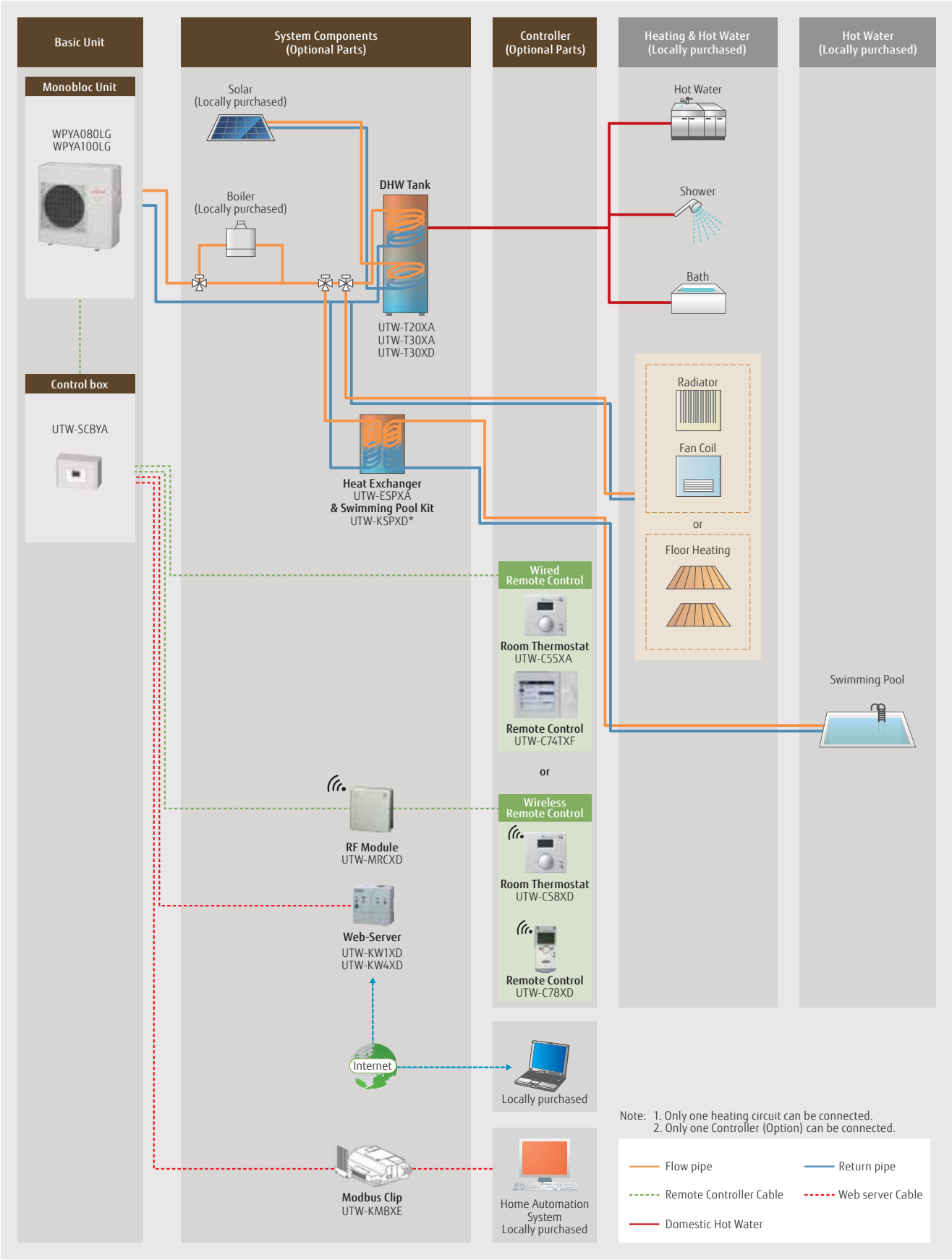
Boiler connected to heating (Boiler + Heating)



2 emitter simultaneous heating & Domestic Hot Water (Cascade)

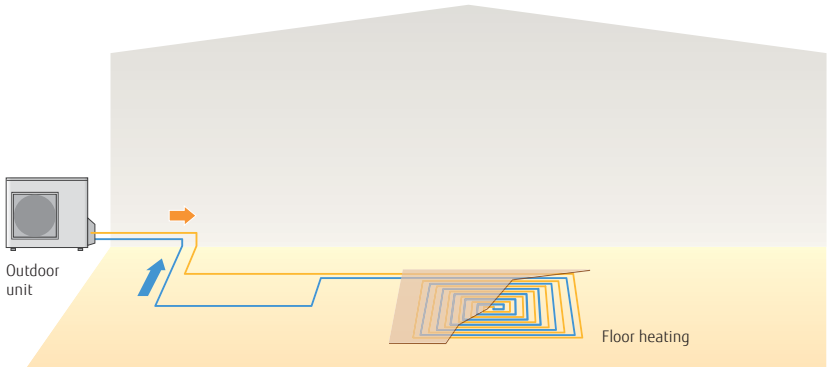


System Configuration

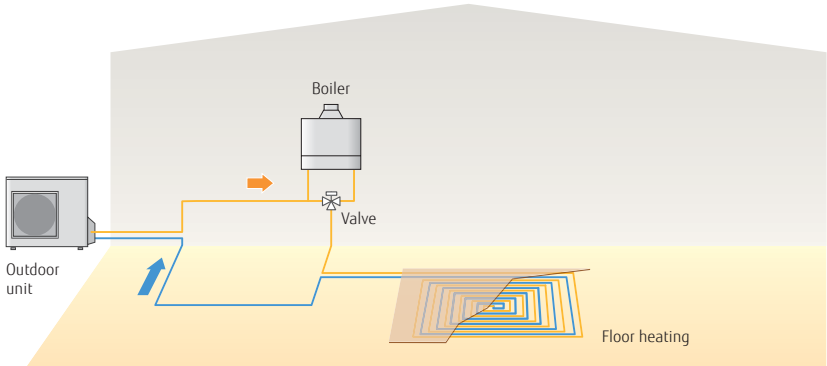


System Case Studies

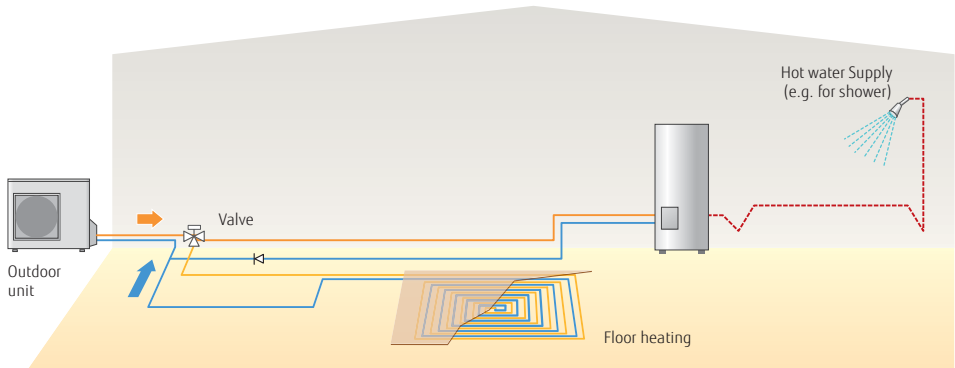
Single heating system



Boiler connected to heating (Boiler + Heating)



2 types of heat distribution



OPTIONAL PARTS

Optional parts compatibility for system

Product Name		Model Name	Split								Monobloc		
			High Power					Comfort				Compact	
			1Ø		3Ø			1Ø				1Ø	
			11	14	11	14	16	5	6	8	10	8	10
2nd Circuit Kit		UTW-KZSXE	●	●	●	●	●	●	●	●	—	—	
Boiler Connection kit		UTW-KBSXD	●	●	●	●	●	●	●	●	—	—	
Balancing vessel		UTW-TEVXA	●	●	●	●	●	●	●	●	●	●	
DHW kit		UTW-KDWXG	—	—	—	—	—	—	—	—	●	●	
		UTW-KDWXD	●	●	●	●	●	●	●	●	●	●	
DHW tank	200 Liter 300 Liter 	UTW-T20XA UTW-T30XA	●	●	●	●	●	●	●	●	●	●	
	300 Liter 	UTW-T30XD	●	●	●	●	●	●	●	●	●	●	
Circulating pump		UTW-PHFXD	●	●	●	●	●	—	—	—	—	—	
Swimming Pool kit		UTW-KSPXD	●	●	●	●	●	●	●	●	—	—	
Heat Exchanger for swimming pool kit		UTW-ESPPXA	●	●	●	●	●	●	●	●	●	●	
Cooling kit		UTW-KCLXD	●	●	●	●	●	●	●	●	—*1	—*1	
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	●	●	●	●	●	—	—	—	●	—	

Optional parts compatibility for control

Product Name		Model Name	Split								Monobloc		
			High Power					Comfort				Compact	
			1Ø		3Ø			1Ø				1Ø	
			11	14	11	14	16	5	6	8	10	8	10
HMI Kit		UTW-KHMXE*2	●	●	●	●	●	●	●	●	—	—	
Remote Controller	Wired 	UTW-C74TXF*2	●	●	●	●	●	●	●	●	—	—	
		UTW-C74HXF*2	●	●	●	●	●	●	●	●	—	—	
	Wireless 	UTW-C78XD	●	●	●	●	●	●	●	●	●	●	
		UTW-C78XD-E*3	●	●	●	●	●	●	●	●	●	●	
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	●	●	●	●	●	●	●	●	—	—	
Base Heater		UTW-HAMXE	—	—	—	—	—	—	—	—	●	●	
Zone control kit		UTW-KZMXG	—	—	—	—	—	—	—	—	●	●	
Service Tool (incl.OCI700 adaptor)		UTW-KSTXD	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	●*4	
Service Tool Software		UTW-KPSXD	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	●*5	
External connect kit		UTY-XWZXZ2	●	●	●	●	●	—	—	—	—	—	

●: Available —: Not Available

*1: Cooling operation is possible without cooling kit

*2: 19 Languages included, no separate Eastern European RC necessary

*3: Eastern European Language (English, Czech Republic, Slovakia, Poland, Turkey, Hungary, Russia, Slovenia, Greece, Serbia)

*4: UTW-KL1XD is required for the connection. C74TXF: Built in Room Temperature sensor C74HXF: Built in Room temperature and Humidity sensor

*5: UTW-KW1XD or UTW-KW4XD is required for the connection.

OTHERS

Simple Installation & Maintenance

Installation Information

Specifications & Dimensions

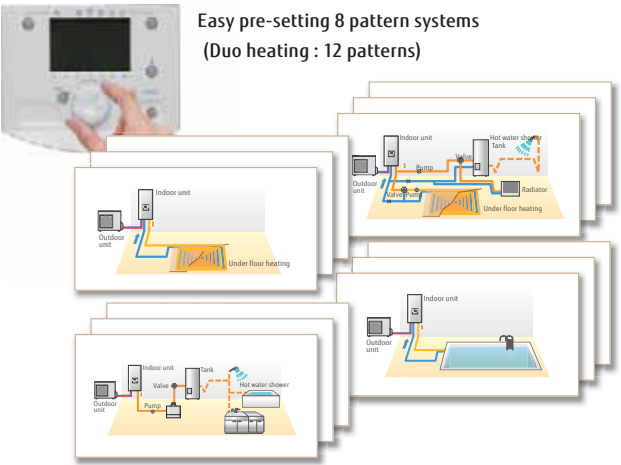
Model Selection Software



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.

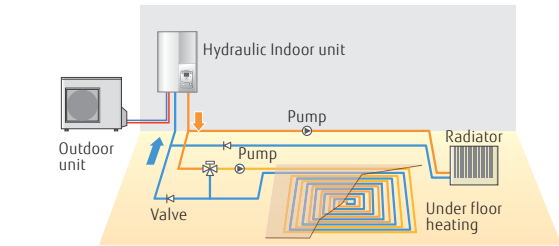


Configurstion (Parameter 5700)	Type of installation
Pre setting 1	1 heating circuit
Pre setting 2	2 heating circuit
Pre setting 3	1 heating circuit & boiler backup
Pre setting 4	2 heating circuit & boiler backup
Pre setting 5	1/2 heating circuit & buffer control
Pre setting 6	1/2 heating circuit & buffer 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.



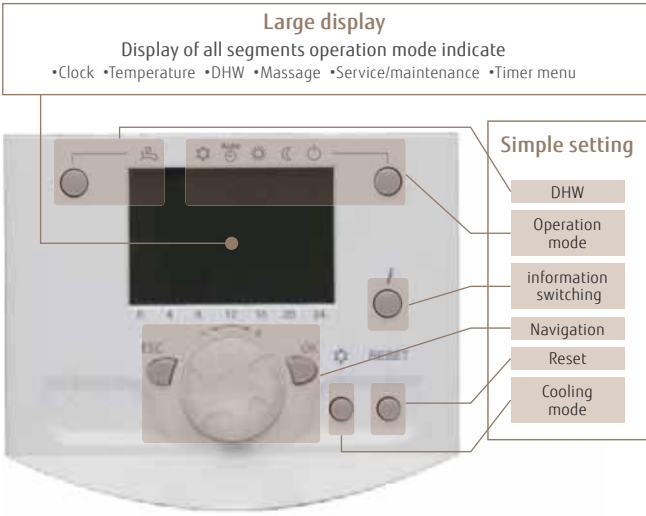
Outdoor temperatures in the range from -50°C to +50°C can be simulated.

Floor drying

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



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



Main operation flow and setting contents for installers and end users

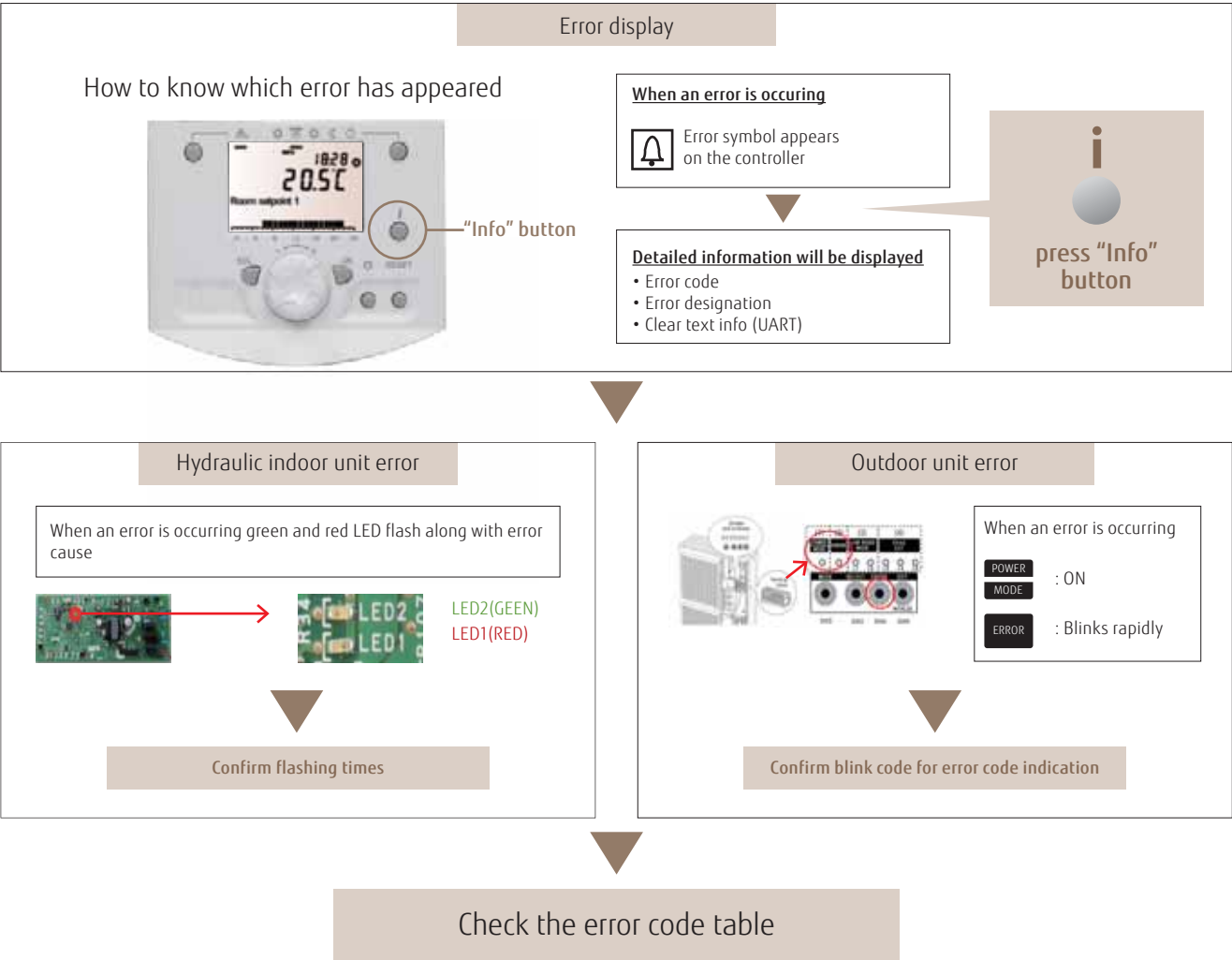
	Flow Chart	Example Item
Installers	1 Install Setting	Pump speed setting, Configuration, Heating curve setting, Heat pump shut off
	2 Option Setting	Cooling kit, DHW kit, Boiler kit, Swimming pool kit
	3 Convenient Function	Automatic Heating curve setting, Floor controlled driving, Outdoor temperature 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

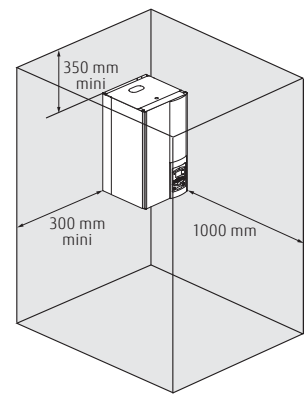
- All hydraulic safety & controlling components built in, no additional selection required
- Lifting bars for an installation without any difficulty or risk
- Easy access for maintenance operations
- No installation of refrigerant circuit connections (Only Monobloc)
- Refrigerant pump down operation

Maintenance Support

Diagnostics function for trouble shooting



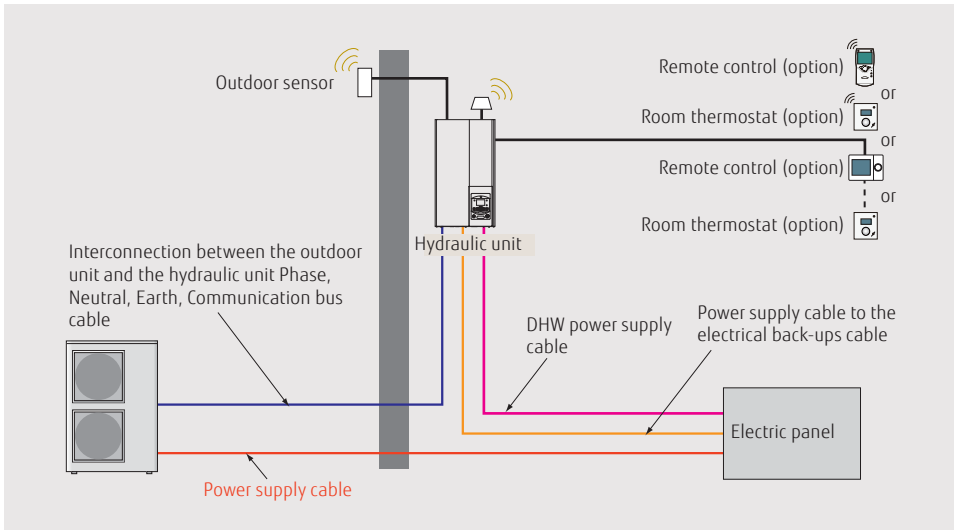
S



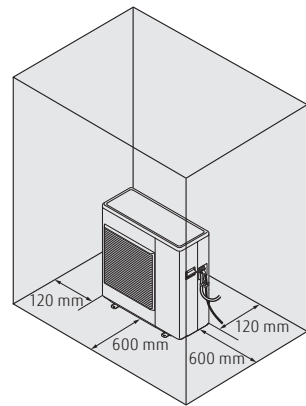
Hydraulic indoor unit

- Hydraulic unit is to be hang on the wall
- Weight < 60kg (including water)
- Distances for maintenance should be respected

Electrical Wiring



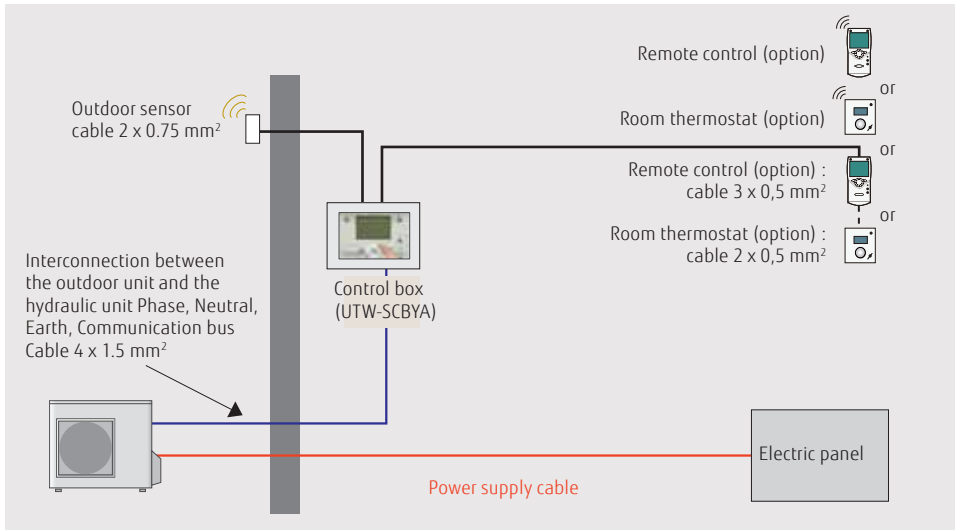
M



Outdoor unit

- Floor stand
- Weight < 71 kg (without water)
- Distances for maintenance should be kept

Electrical Wiring



SPECIFICATIONS & DIMENSIONS Split type

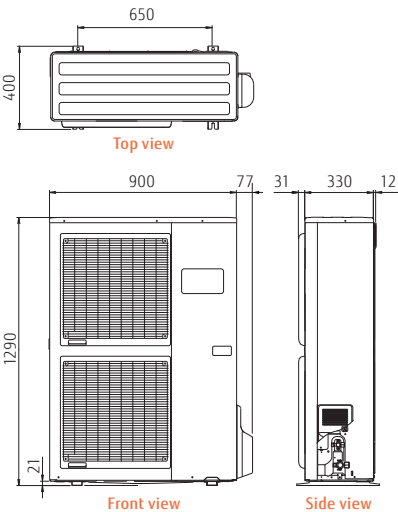
Specifications (High Power series)

Model Name		Hydraulic indoor unit		WSYG140DG6		WSYG140DG6		WSYK160DG9		WSYK160DG9			
		Outdoor unit		WOYG112LCTA		WOYG140LCTA		WOYK112LCTA		WOYK140LCTA			
Capacity range				11		14		11		14			
7°C/35°C floor heating *1	Heating capacity	kW	10.80		13.50		10.80		13.50				
	Input power		2.54		3.23		2.51		3.20				
	COP		4.25		4.18		4.30		4.22				
2°C/35°C floor heating *1	Heating capacity	kW	10.77		12.00		10.77		13.00				
	Input power		3.44		3.87		3.40		4.15				
	COP		3.13		3.10		3.17		3.13				
-7°C/35°C floor heating*1	Heating capacity	kW	10.38		11.54		10.38		12.20				
	Input power		4.32		5.08		4.28		5.13				
	COP		2.40		2.27		2.43		2.38				
Space heating characteristics*2													
Temperature application		°C		55		35		55		35			
Energy efficiency class				A+		A++		A+		A++			
Rated heat output(P _{rated})		kW		9		11		9		11			
Seasonal space heating energy efficiency(η _s)		%		109		151		112		154			
Annual energy consumption		kWh		6842		6062		6669		5930			
Sound power level	Hydraulic indoor unit	dB(A)		46		46		46		46			
	Outdoor unit			68		69		69		68			
Hydraulic unit Specification													
Power source				1 Ø 230 V 50 Hz				3 N 400 V 50 Hz					
Dimensions H×W×D		mm						800 × 450 × 457					
Weight (Net)		kg						42					
Water circulation		Min/Max		L/min		19.5/39.0		24.4/48.7		19.5/39.0			
Buffer tank capacity		L						16					
Expansion vessel capacity		L						8					
Leaving water temperature range		Max		°C						60			
Water pipe connection diameter		Flow/Return		mm						Ø 25.4/Ø 25.4			
Backup heater		Capacity		kW		6.0(3.0kW×2pcs.)				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			
Dimensions H × W × D		mm						1,290 × 900 ×330					
Weight (Net)		kg		92				99					
Refrigerant (Global warming potential)								R410A (2,088)					
Refrigerant amount		kg						2.50					
Additional refrigerant charge amount		g/m						50					
Connection pipe	Diameter	Liquid	mm						Ø 9.52				
		Gas	mm						Ø 15.88				
	Length	Min/Max	m						5/20				
	Length(Pre-charge)			m						15			
Operation range	Height difference	Max	m						15				
	Heating	°C						-25 to 35					

Dimensions (High Power series)

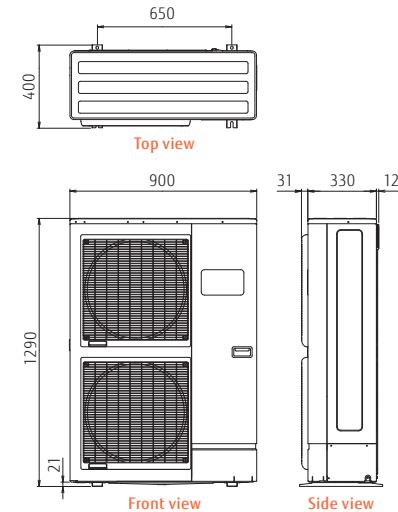
Outdoor Unit

WOYG112LCTA/WOYG140LCTA



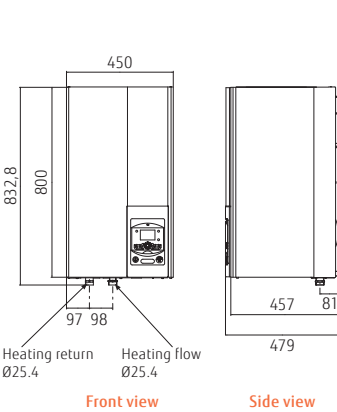
Outdoor Unit

WOYK112LCTA/WOYK140LCTA/WOYK160LCTA



Hydraulic Indoor Unit

WSYG140DG6/WSYK160DG9



Specifications (Comfort series)

Model Name			Hydraulic indoor unit		WSYA050DG6		WSYA100DG6		WSYA100DG6		WSYA100DG6	
			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	
Energy efficiency class					A+		A++		A+		A++	
Rated heat output(P _{rated})			kW		4		5		6		7	
Seasonal space heating energy efficiency(η _s)			%		115		169		118		156	
Annual energy consumption			kWh		3026		2160		3886		3375	
Sound power level	Hydraulic indoor unit		dB(A)		46		46		46		46	
	Outdoor unit				65		63		69		68	
Hydraulic 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		18.1/36.1	
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		18.5	
Dimensions H × W × D			mm		620 × 790 ×290							
Weight (Net)			kg		41				42		60	
Refrigerant (Global warming potential)			R410A (2,088)									
Refrigerant amount			kg		1.10				1.40		1.80	
Additional refrigerant charge amount			g/m		25						40	
Connection pipe	Diameter	Liquid	mm		Ø 6.35						Ø 9.52	
		Gas			Ø 12.70				Ø 15.88			
	Length	Min/Max	m				5/30					
		Length(Pre-charge)	m				15					
Operation range	Height difference	Max	m				20					
		Heating	°C				-20 to 35					

SPECIFICATIONS & DIMENSIONS Monobloc type

Specifications

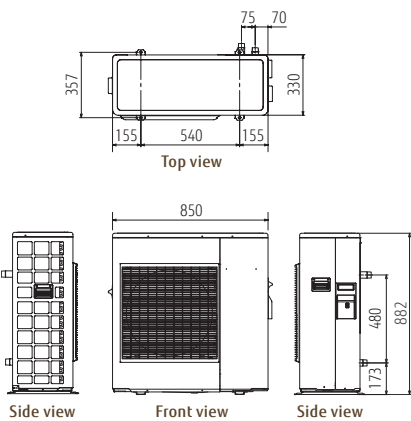
Model Name		Outdoor unit		WPYA080LG	WPYA100LG	
Capacity range				8	10	
7°C/35°C floor heating *1	Heating capacity	kW		8.00	10.00	
	Input power			1.78	2.30	
	COP			4.50	4.35	
2°C/35°C floor heating *1	Heating capacity	kW		4.35	4.90	
	Input power			1.23	1.44	
	COP			3.55	3.40	
-7°C/35°C floor heating*1	Heating capacity	kW		7.10	8.00	
	Input power			2.93	3.32	
	COP			2.42	2.41	
Space heating characteristics*2						
Temperature application		°C	55	35	55	35
Energy efficiency class			A+	A++	A+	A++
Rated heat output(P _{rated})		kW	6	7	7	8
Seasonal space heating energy efficiency(η _s)		%	123	168	118	167
Annual energy consumption		kWh	3828	3580	4491	3700
Sound power level		Outdoor unit	dB (A)	65	68	
Outdoor unit specification						
Power source		1 Ø 230 V 50 Hz				
Dimensions H × W × D		mm	882 × 850 × 330			
Weight (Net)		kg	72			
Current	Max	A	15.2	17.5		
Water circulation		Min/Max	L/min	10.0/30.0		
Water pipe connection diameter		Flow/Return	mm	Ø 25.4/Ø 25.4		
Refrigerant		R410A (2,088)				
Refrigerant amount		kg	1.72			
Leaving water temperature range		Max	°C	55		
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.

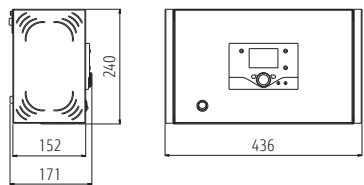
*2:All information of ErP can be available for downloaded from www.fujitsu-general.com/global/products/erp-ecodesign/index.html.

Dimensions

Outdoor Unit
WPYA080LG/WPYA100LG



Control box
UTW-SCBYA



MODEL SELECTION SOFTWARE

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

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 visible images of the optional items enables 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.



Estimate function

The software automatically provides the cost estimate of the entire WATERSTAGE system, not only the equipment itself but also the optional items.



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 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.



Creating project files for customers

Various kinds of documents such as an equipment list, a system diagram, a cost estimate table, and an equipment CAD data can be printed out to paper or output into the files. This function also comes with a feature which allows you to change the template design of the documents.

Software updates

The database can be automatically updated through FTP by automatic update function.

Room Heating
Domestic Hot Water
Swimming Pool
Cooling
and much more ...

WATERSTAGE™

- Specifications and design are subject to change without notice for future improvement.
- For further details, please check with our authorized dealer.
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