

FUJITSU

WATERSTAGE™

INNOVATIVE SOLUTION OF DOMESTIC HEATING

SPLIT TYPE & MONOBLOCK TYPE

High Power model

Comfort model

Compact model



Air to Water



FUJITSU GENERAL LIMITED

WATERSTAGE™ is an **Economical** and **Clean** hot water heating system by **Heat Pump**

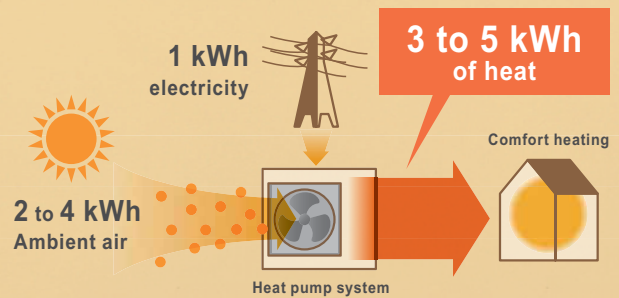


WATERSTAGE™ is an efficient hot water heating system which uses heat pump technology nurtured over many years by Fujitsu General to produce domestic hot water by using the unlimited aero thermal heat source.

A wide range of hot water heating systems, from floor heating to radiator heating, hot water supply, and swimming pool, is available to meet living needs.

WHAT'S A HEAT PUMP ?

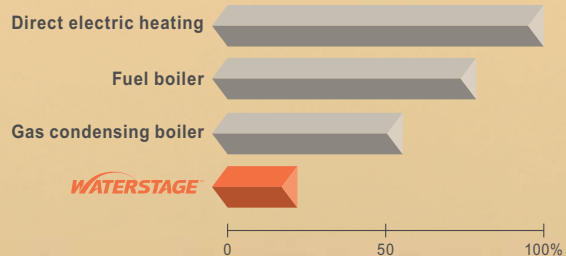
Absorbing the free energy from atmosphere. Heat pump system requires only 1kW of electricity to generate 3 to 5 kW thermal energy.



LESS CO₂ EMISSIONS

This environmentally-friendly system substantially reduces CO₂ emissions compared to conventional kerosene, gas, and other fuel combustion heating systems.

Average annual CO₂ emissions

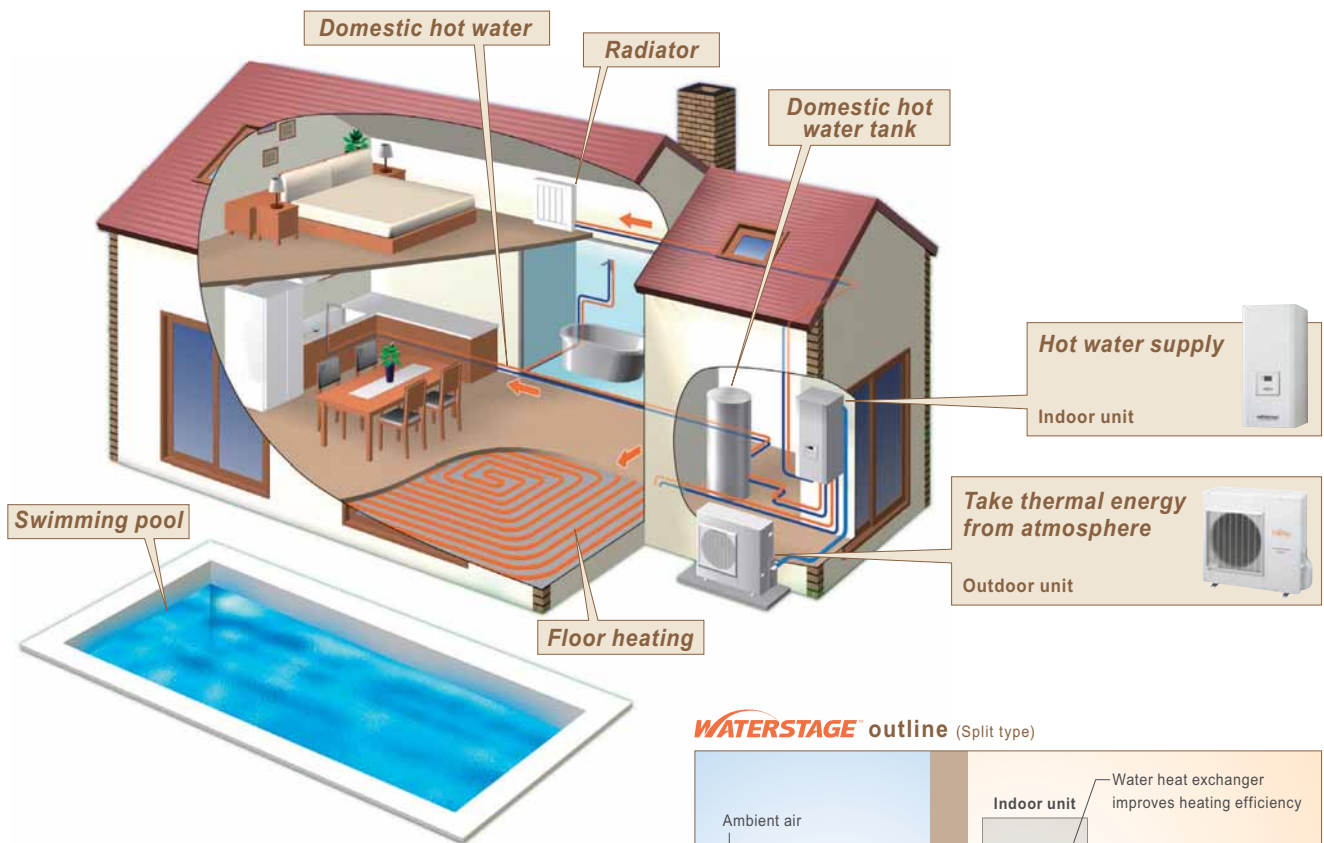


Calculations based on data provided by European Program-2001 for EU27 Fuel boiler efficiency: 89%, Gas boiler efficiency: 93%



FLOOR HEATING

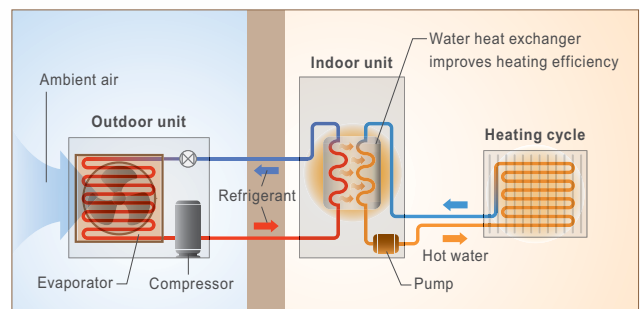
Complete Solution meets various needs



Wide Comfort by WATERSTAGE

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

WATERSTAGE outline (Split type)

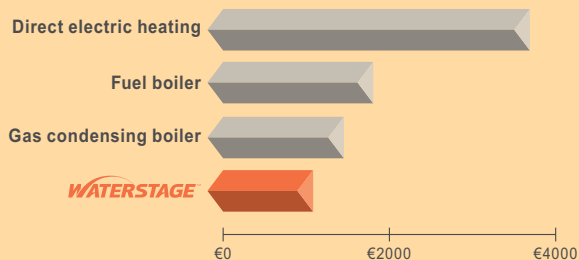


Advantages of WATERSTAGE

LOW RUNNING COST

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

Average annual running cost



*The values of above graph are calculated in Europe and the graph is illustrative only. The values may vary depending on installation, location, and operating conditions.

CLEAN AND HEALTHY

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

LOW NOISE

Inverter control realizes quiet operation friendly to the usage environment.

LONG LIFE AND EASY MAINTENANCE

There is no accumulation of soot, etc. by combustion, and maintenance effort is significantly reduced.



Satisfying both of *High Power* and *High COP* realizes m

High Power model

High Power model realizes powerful heating capacity and high water temperature at cold winter, suitable for cold region.

NEW model

11kW 14kW

Single Phase power supply
Outdoor units



WOYG112LBT
WOYG140KLBT

Indoor units



WSYG140DB6

11kW 14kW 16kW

3 Phase power supply
Outdoor units



WOYK112LAT
WOYK140LAT
WOYK160LAT



WSYK160DA9

Comfort model

5kW 6kW 8kW 10kW 13kW 16kW

Abundant line-up meets a wide range of needs.

Outdoor units



AOYA18LALL AOA30LBTL
AOYA24LALL

Indoor units



WSYA050DA
WSYA065DA
WSYA080DA
WSYA095DA
WSYA128DA
WSYA155DA



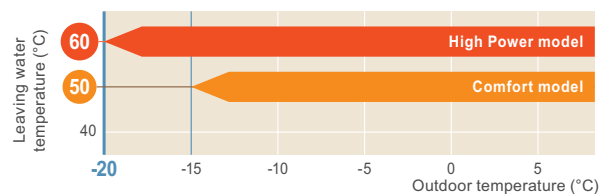
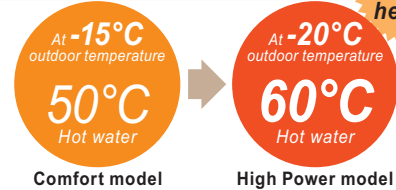
AOYA45LBTL
AOY54LJBTL

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 immediately in cold region during winter.

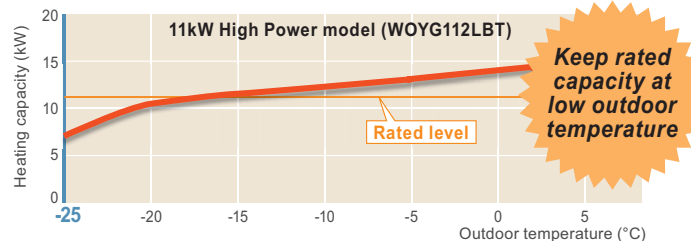
HIGH LEAVING WATER TEMPERATURE

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

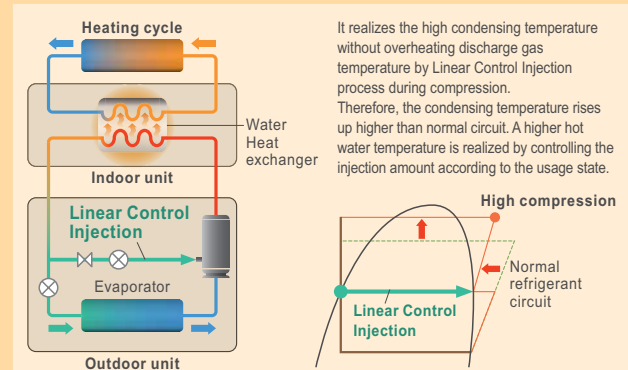


HIGH HEATING CAPACITY (High Power model)

Keeping the high heating capacity at even low outdoor temperature.



FUJITSU GENERAL's advanced Linear Control Injection Technology (High Power model)



High Efficiency

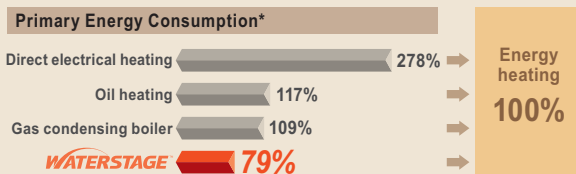
Energy efficiency is improved by the linear Control Injection Technology and the optimization of refrigerant cycle control. High power model realizes high performance and high efficiency by adopting twin sensors and control technology corresponding to hot water heating.

HIGH COP



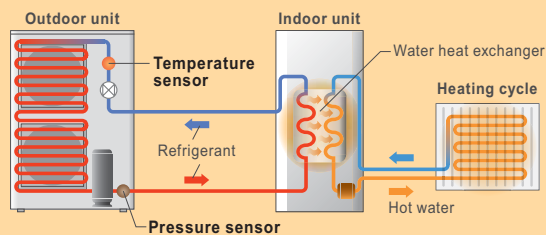
*The data refer to 16kW type Condition : Outdoor Temp. 7°C Heating Temp. 35°C.

Proportion of primary energy into heating energy of 100%

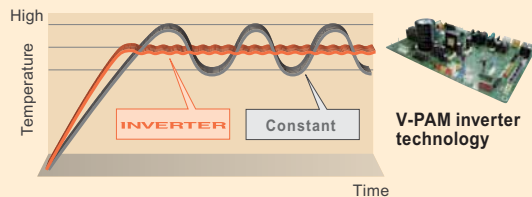


*Electricity loss is different due to power plant. Efficiency of power plant : 36%

Optimization of refrigerant cycle operation (High Power model)

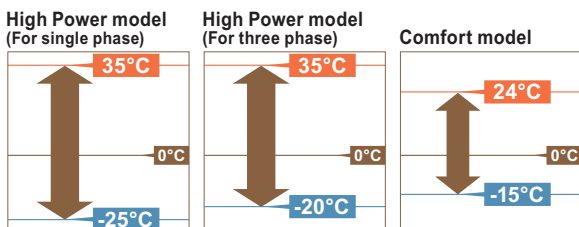


Accurate temperature control by DC inverter technology



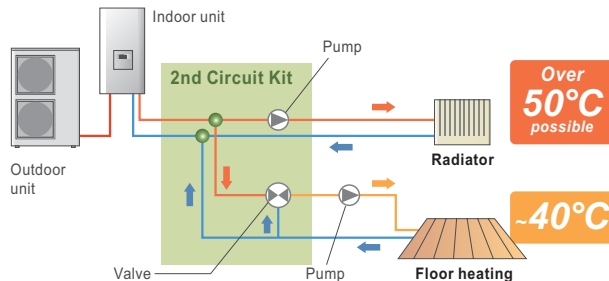
Wide Operation Range

Improvement operation range depending on the optimization of refrigerant cycle control



Intelligent Control

2 ZONE INDIVIDUAL CONTROL* (Split type only)



AND MORE

- Automatic temperature regulation in accordance with heating curve. (Depends on terminal and outdoor temperature)
- Cooling operation is possible*
- Anti-Legionella function
- Additional electric heater control for backup
- 2 stage Low noise mode* (High Power model only)
- Peak cut function* (High Power model only)

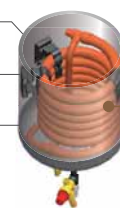
*Optional parts are required.

High Reliability

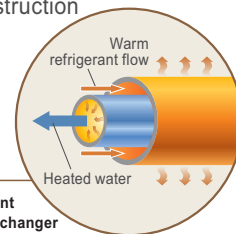
HIGH CLEAN AND DURABILITY

- Corrosion protected
- No fouling through heat exchanger construction
- Hot water is permanently available

Stainless steel buffer tank
Optimum co-axial heat exchanger
Anti-freeze is unnecessary



Highly efficient water heat exchanger
Double-pipe water heat exchanger with built-in tank to reduce loss

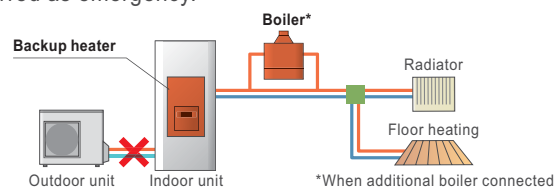


EASY INSTALLATION & MAINTENANCE

- All hydraulic components built in no additional selection for water flow required
- Lifting bars for an installation without any difficulty or risk
- Easy access for maintenance operations
- Pump down operation (High Power model only)

EMERGENCY OPERATION

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



All-in-One type with *Easy Access* for Installation and M

Compact model

8kW 10kW

Comfort and energy saving realized by world's top class compact design



WPYA080LA
WPYA100LA



Control box
UTW-SCBYA

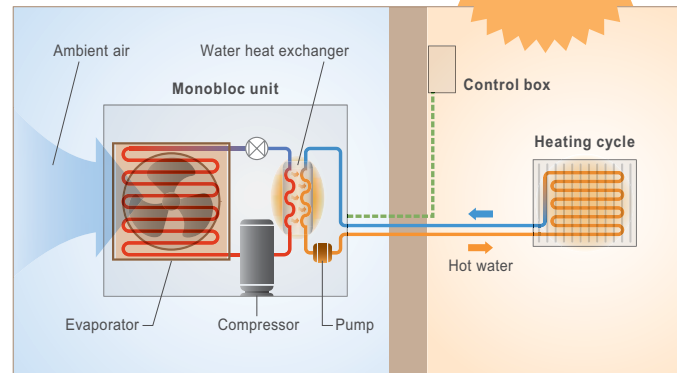
All-in-One Model

Compact design which built in all hydraulic components and the heat pump unit make refrigerant piping work unnecessary. Easy installation and maintenance are realized.



**Easy
installation &
maintenance!**

WATERSTAGE[®] outline (Monobloc type)



High Efficiency Technology

DC INVERTER

Smooth water temperature control realized by DC inverter control.



HIGH EFFICIENT PLATE WATER HEAT EXCHANGER

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



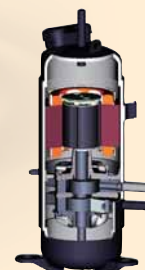
DC FAN MOTOR

High performance, high efficiency small DC fan motor mounted.



DC TWIN ROTARY COMPRESSOR

High efficient DC twin rotary compressor corresponding to low outdoor temperature



Compact & High Performance

HIGH COP

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

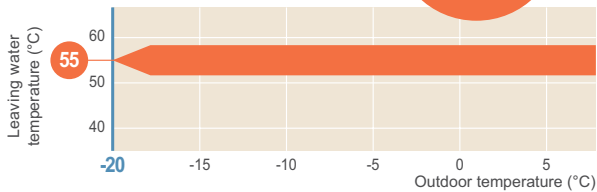


*Condition : Outdoor Temp. 7°C Heating Temp. 35°C.

HIGH LEAVING WATER TEMPERATURE

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

No backup heater
At -20°C outdoor temperature
55°C Hot water

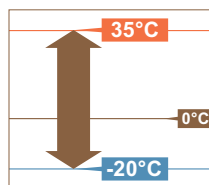


COMPACT & LIGHT WEIGHT DESIGN



Wide Operation Range

Possible to operate heating under -20°C of outdoor temperature



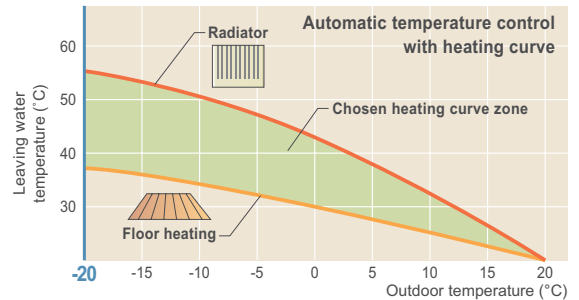
Intelligent Control

WIRED REMOTE CONTROLLER (CONTROL BOX) IS ADOPTED STANDARD.



AUTOMATIC HEATING CURVE CONTROL

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



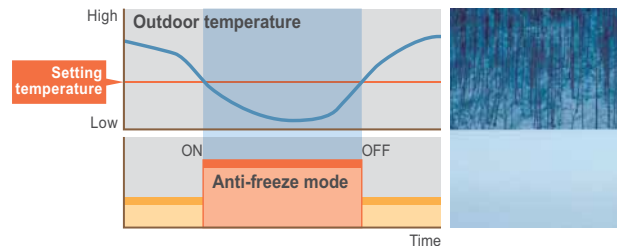
AND MORE

- Cooling operation is possible*
 - Anti-Legionella function
 - Possible to docking the boiler and electric heater for backup
- *Optional parts are required.

High Reliability

ANTI-FREEZE FUNCTION

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

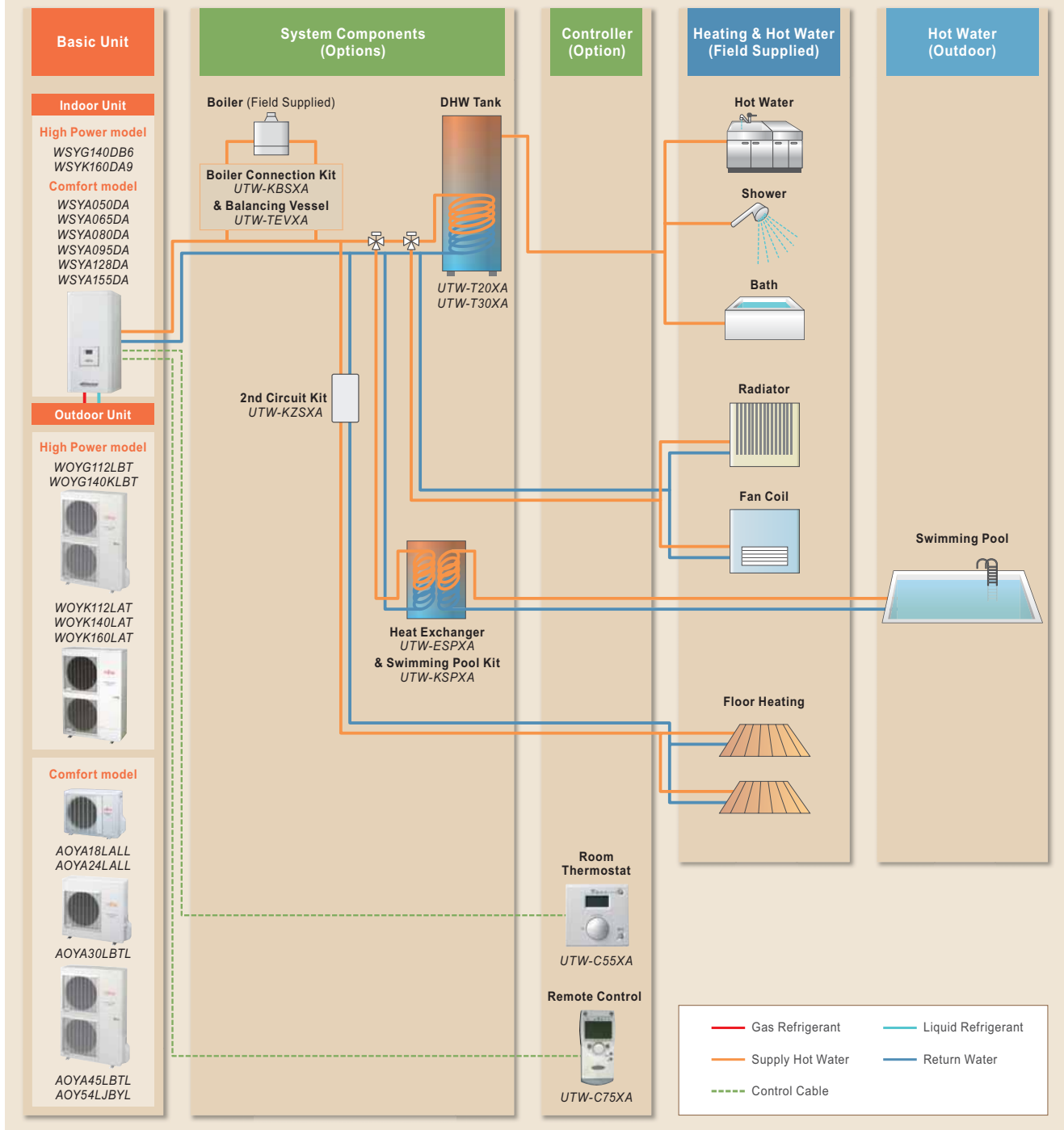


EASY INSTALLATION & MAINTENANCE

- No installation of refrigerant circuit connections.
- Closed type enables decrease in the supply frequency of circulating water.
- Easy access for maintenance operations

Total solution provides comfort to all over the home

SPLIT TYPE



OPTIONAL PARTS

2nd Circuit Kit
*Split type only



UTW-KZSXA

Boiler Connection Kit



UTW-KBSXA

Balancing Vessel



UTW-TEVXA

DHW Kit



UTW-KDWXA

DHW Tank 200L



UTW-T20XA

DHW Tank 300L



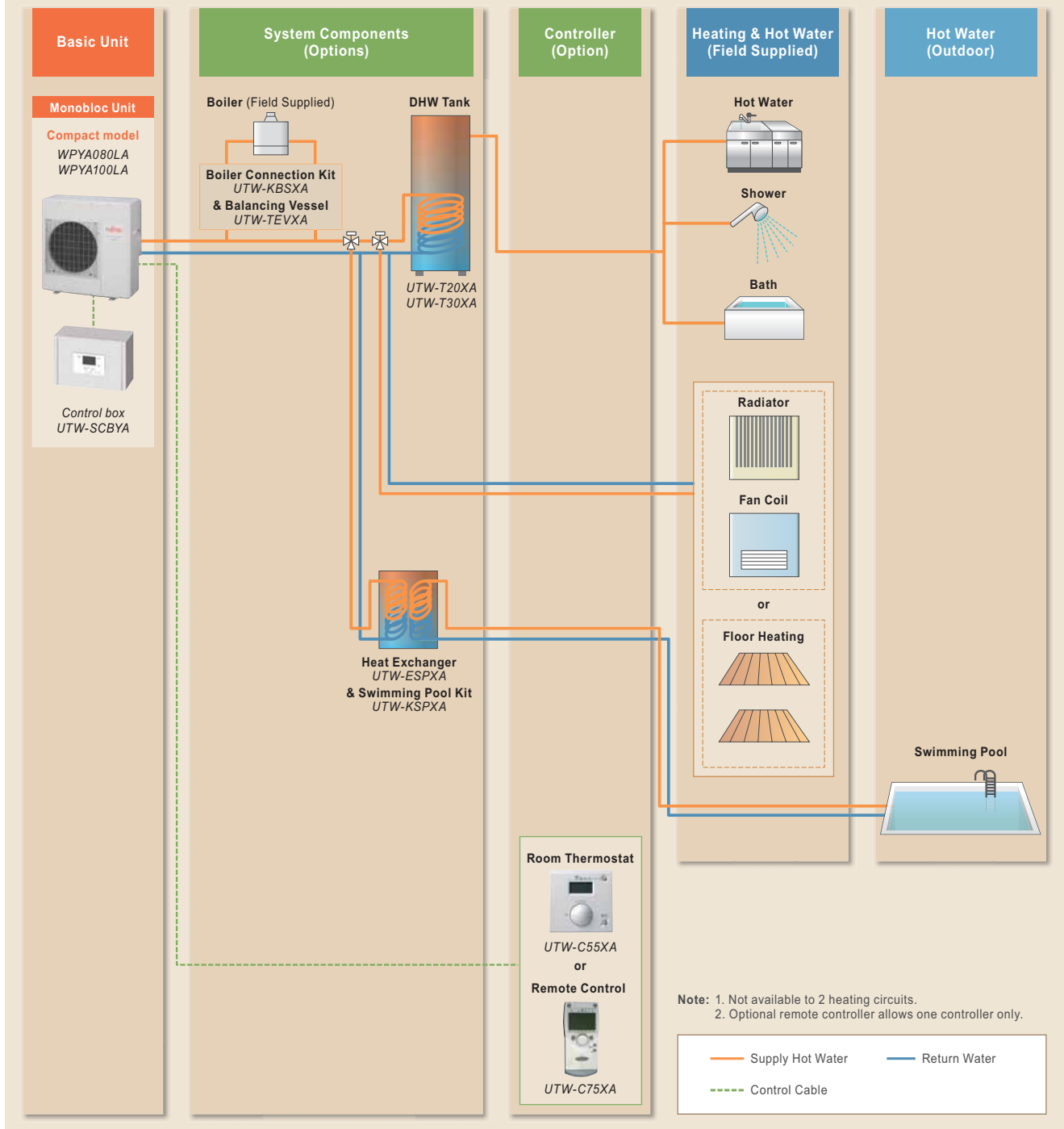
UTW-T30XA

High Flow Rate Circulating Pump Kit



UTW-PHFXA

MONOBLOC TYPE



Swimming Pool Kit



UTW-KSPXA

Heat Exchanger for swimming pool



UTW-ESPXA

Cooling Kit



UTW-KCLXA

Cooling Kit (High flow rate)



UTW-KCHXA

Remote Control



UTW-C75XA

Room Thermostat



UTW-C55XA

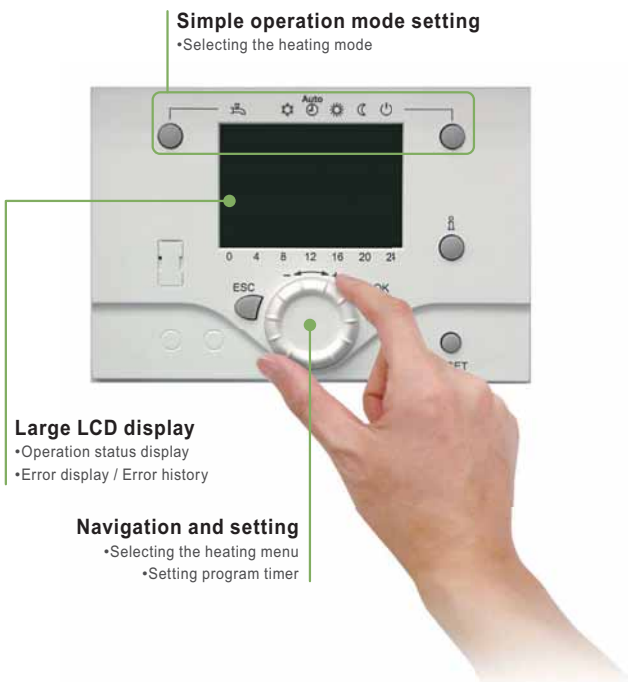
External Connect Kit



UTY-XWZXZ2

Smart & Comfort Control

The outdoor temperature is detected by sensor and the heating water temperature is controlled automatically. The setting of room temperature and operation mode can be easily set. A wide range of control from heating to hot water supply and swimming pool is possible by combining with abundant optional parts.



Convenience

PROGRAMMED OPERATION

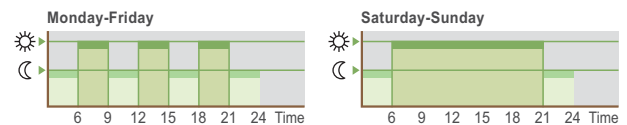
- The setting of programmed operation can be easily set.
- Changing the heating mode linked with time is possible.

Heating mode

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

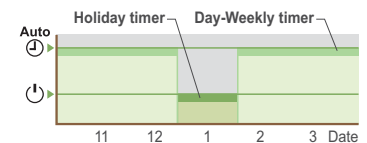
Day-Weekly timer setting

- 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

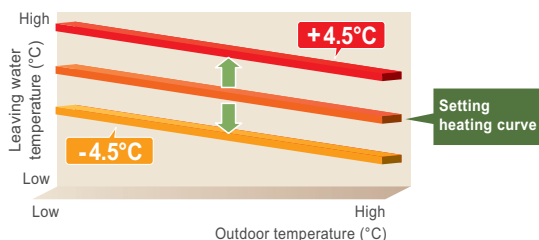
- The holiday timer can be set up for up to 8 periods
- If you are absent for a long time in the winter, freezing of room can be prevented.



Comfort

FLEXIBLE HEATING CIRCUIT

Automatic hot water temperature control matched to the application can be set. In addition, set temperature coefficient offset can be adjusted easily high or low side matched to the usage conditions.



ANTI-LEGIONELLA FUNCTION

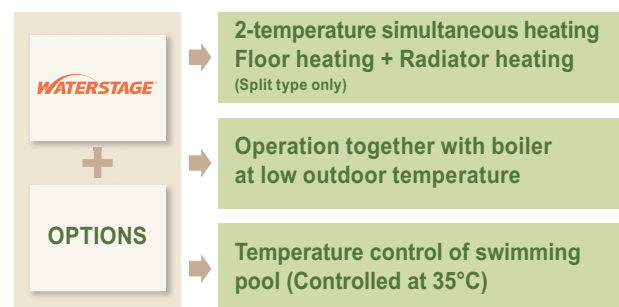
The growth of Legionella in DHW tank is suppressed and safe and clean hot water is supplied at all times.



Extendibility

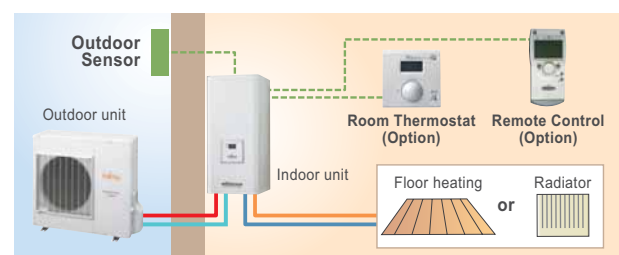
DIVERSE OPERATION CONTROL

Meets diverse needs by combining with optional parts.



REMOTE CONTROL-EXTENSION

Optional remote controller allows controls of hot water depending on indoor temperature.



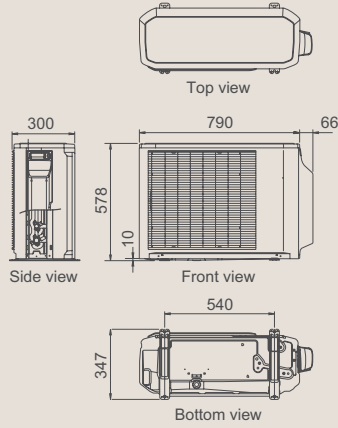
(Split type)

SPLIT TYPE

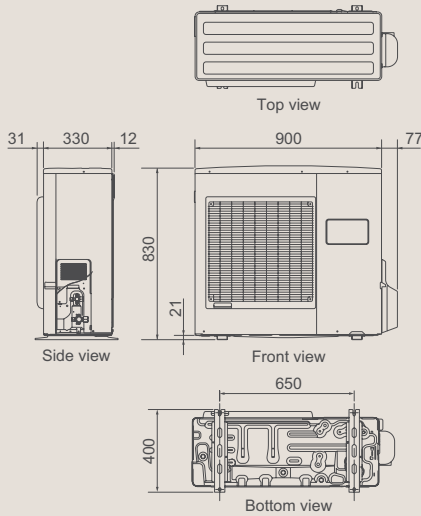
Unit : mm

Outdoor Units Comfort model

AOYA18LALL / AOYA24LALL

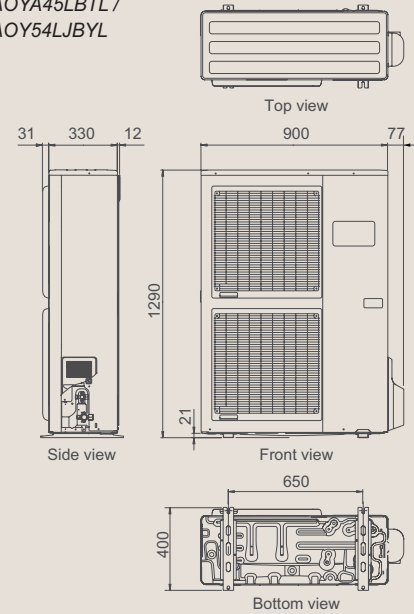


AOYA30LBTL



Outdoor Units High Power model

WOYG112LBT /
WOYG140KLBT

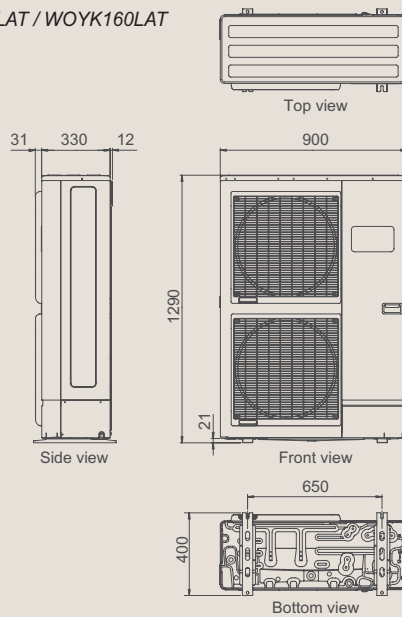


Outdoor Units Comfort model

AOYA45LBTL /
AOY54LJBYL

Outdoor Units High Power model

WOYK112LAT / WoyK140LAT / WoyK160LAT

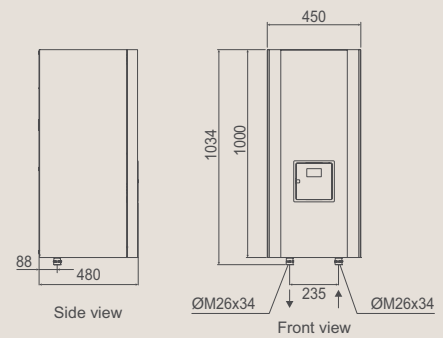


Indoor Units High Power model

WSYK160DA9

Indoor Units Comfort model

WSYA050DA / WSYA065DA / WSYA080DA
WSYA095DA / WSYA128DA / WSYA155DA

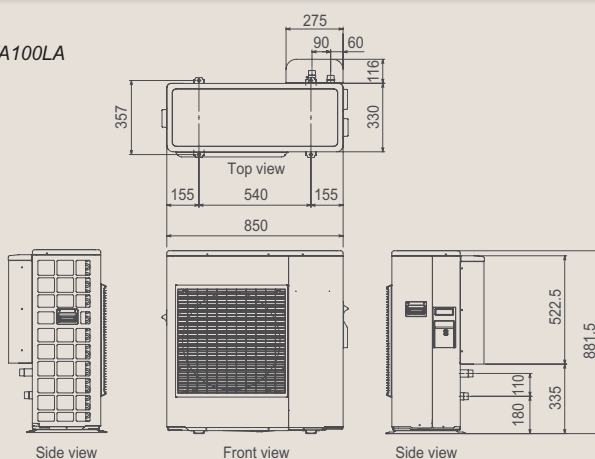


MONOBLOC TYPE

Unit : mm

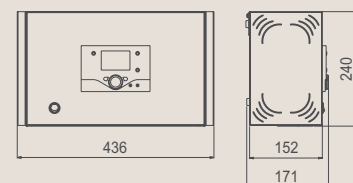
Compact model

WPYA080LA / WPYA100LA









Control Box

UTW-SCBYA



SPECIFICATIONS

Type		Split system																	
Series name		High Power series					Comfort series												
																			
Capacity range (kW)		11	14	11	14	16	5	6	8	10	13	16							
+7°C / +35°C floor heating *1	Heating capacity	kW		11.20	14.00	11.20	14.00	16.00	4.60	6.50	8.00	10.30	13.70	16.20					
	Input power	kW		2.54	3.25	2.51	3.22	3.72	1.07	1.63	2.00	2.58	3.42	4.15					
	COP	kW		4.40	4.30	4.46	4.35	4.30	4.30	4.00	4.00	4.00	4.00	3.90					
+2°C / +35°C floor heating *1	Heating capacity	kW		11.20	14.00	11.20	14.00	15.10	4.31	5.59	6.39	8.69	12.31	13.94					
	Input power	kW		3.54	4.51	3.45	4.40	4.87	1.36	2.05	2.34	3.21	3.87	4.77					
	COP	kW		3.16	3.10	3.25	3.18	3.10	3.16	2.73	2.73	2.71	3.18	2.92					
-7°C / +35°C floor heating *1	Heating capacity	kW		11.20	14.00	11.20	14.00	15.00	4.80	5.60	7.00	8.10	11.55	12.40					
	Input power	kW		4.16	5.47	3.92	5.15	5.55	1.77	2.24	2.54	3.52	4.37	4.77					
	COP	kW		2.69	2.56	2.86	2.72	2.70	2.70	2.50	2.75	2.30	2.64	2.60					
+7°C / +45°C radiators *1	Heating capacity	kW		9.60	12.00	10.50	13.10	15.10	4.17	5.40	6.20	8.30	9.70	13.30					
	Input power	kW		2.77	3.50	2.90	3.70	4.42	1.23	1.61	1.88	2.51	2.98	4.20					
	COP	kW		3.46	3.42	3.62	3.54	3.42	3.38	3.35	3.30	3.30	3.26	3.17					
-7°C / +45°C radiators *1	Heating capacity	kW		9.60	12.00	10.50	13.10	14.50	4.05	5.10	5.90	7.00	9.20	11.00					
	Input power	kW		4.12	5.32	4.16	5.39	6.38	1.78	2.32	2.62	3.33	4.30	5.37					
	COP	kW		2.33	2.26	2.52	2.43	2.27	2.28	2.20	2.25	2.10	2.14	2.05					
Backup heater	Capacity	kW×pcs.		6.0(3.0×2 pcs.)	6.0(3.0×2 pcs.)	9.0(3.0×3 pcs.)	9.0(3.0×3 pcs.)	9.0(3.0×3 pcs.)	3.0(1.5×2 pcs.)	3.0(1.5×2 pcs.)	3.0(1.5×2 pcs.)	6.0(3.0×2 pcs.)	6.0(3.0×2 pcs.)	6.0(3.0×2 pcs.)					
Indoor unit		Model name		WSYG140DB6			WSYK160DA9			WSYA050DA	WSYA065DA	WSYA080DA	WSYA095DA	WSYA128DA	WSYA155DA				
Power source		L/min		1Ø 230V, 50Hz			3Ø 400V, 50Hz			1Ø 230V, 50Hz									
Water circulation	Rated	L/min		32.1	40.1	32.1	40.1	45.9	14.3	18.6	22.9	27.2	36.7	44.4					
	Mini / Max	L/min		25.0 / 50.0	25.0 / 50.0	25.0 / 50.0	25.0 / 50.0	25.0 / 50.0	9.0 / 18.3	10.0 / 23.3	14.3 / 28.3	16.7 / 35.0	25.0 / 50.0	25.0 / 50.0					
Dimensions H×W×D		mm		1034 × 450 × 480					1034×450×480										
Weight (Net)		kg		52			53			52.5									
Buffer tank capacity		L		25			25			25									
Expansion vessel capacity		L		8			8			8									
Leaving water temperature range		°C		8 ~ 60			8 ~ 60			8 ~ 50									
Water pipe connection diameter		Flow / Return		mm			Ø25.4 / Ø25.4			Ø25.4 / Ø25.4									
Outdoor unit		Model name		WOYG112LBT	WOYG140LBT	WOYK112LAT	WOYK140LAT	WOYK160LAT	AOYA18LALL	AOYA24LALL	AOYA30LBT	AOYA45LBT	AOY54LJBYL						
Power source		L/min		1Ø 230V, 50Hz			3Ø 400V, 50Hz			1Ø 230V, 50Hz									
Current	Rated	A		10.8	13.7	3.60	4.80	5.50	5.16	7.25	8.27	10.40	13.70	17.10					
	Max	A		21.0	24.0	8.50	9.50	10.50	10.80		11.22	16.00	19.00	24.50					
Noise level (Sound pressure)		dB(A)		55*2	56*2	53*2	55*2	56*2	39*3		40*3	55*2	55*2	55.5*2					
Dimensions H×W×D		mm		1290 × 900 × 330					578 × 790 × 300		578×790×315		830×900×330		1290×900×330		1290×900×330		
Weight (Net)		kg		92			99			40		44		64		98		105	
Refrigerant		kg		R410A					R410A										
Refrigerant amount		kg		2.50			2.50			1.25		1.70		2.20		3.35		3.40	
Additional refrigerant charge amount		g/m		50			50			20		20		40		50		40	
Connection pipe	Diameter	Liquid	mm	Ø9.52					Ø6.35		Ø6.35		Ø9.52		Ø9.52		Ø9.52		
		Gas	mm	Ø15.88					Ø12.70		Ø15.88		Ø15.88		Ø15.88		Ø15.88		
	Length	Mini / Max	m	5 / 20					5 / 15		5 / 15		5 / 20		5 / 20		5 / 20		
		Length (chargeless)	Max	m	15					15		15		20		20		20	
Height difference	Max	m	15					15		15		20		20		20			
	Heating	°C	-25 ~ 35			-20 ~ 35			-15 ~ 24										

Type		Monobloc system	
Series name		Compact series	
			
Capacity range (kW)		8	10
+7°C / +35°C floor heating *1	Heating capacity	kW	
	Input power	kW	
	COP	kW	
+2°C / +35°C floor heating *1	Heating capacity	kW	
	Input power	kW	
	COP	kW	
-7°C / +35°C floor heating *1	Heating capacity	kW	
	Input power	kW	
	COP	kW	
+7°C / +45°C radiators *1	Heating capacity	kW	
	Input power	kW	
	COP	kW	
-7°C / +45°C radiators *1	Heating capacity	kW	
	Input power	kW	
	COP	kW	
Monobloc unit		Model name	
Power source		1Ø 230V, 50Hz	
Water circulation	Rated	L/min	
	Mini / Max	L/min	
Current		Rated	
Noise level (Sound pressure)		dB(A)	
Dimensions H×W×D		mm	
Weight (Net)		kg	
Expansion vessel capacity		L	
Water pipe connection diameter		Flow / Return	
Refrigerant		R410A	
Refrigerant amount		kg	
Leaving water temperature range		°C	
Operation range		Heating	



“WATERSTAGE” is a worldwide trademark of FUJITSU GENERAL LIMITED and is a registered trademark in Japan and other countries or areas.
 *The colors may be different from the actual colors because this catalog is printed matter.
 *Specifications and design subject to change without notice for further improvement.
 Please check with your dealer

Distributed by : Copyright© 2009-2010 Fujitsu General Limited. All rights reserved.

*1. The values of heating capacity/power input/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 and these values.

*2. Sound pressure level measured at distance of 1m from the device and at a height of 1.5m above ground in free field

*3. Sound pressure level measured at distance of 5m from the device and at a height of 1.5m above ground in free field