WATERSTAGE™

Innovative Solution of Domestic Heating

SPLIT TYPE / SPLIT DHW INTEGRATED TYPE

AIR TO WATER

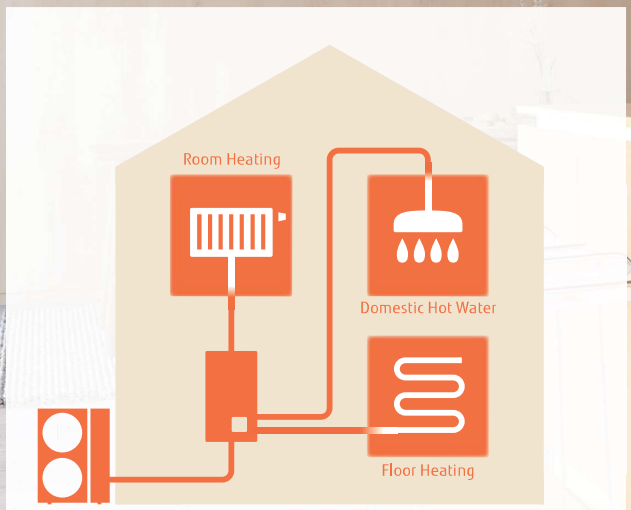
Residential

FUJITSU GENERAL LIMITED

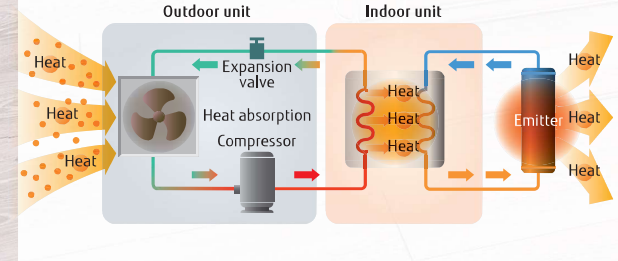
WATERSTAGE™ Overview

Complete Solution meets various needs

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



Heat Pump system framework



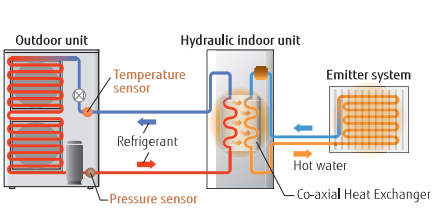
30 Models

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

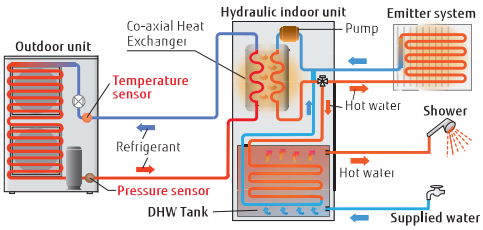
Optimization of refrigerant cycle operation

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

Split type

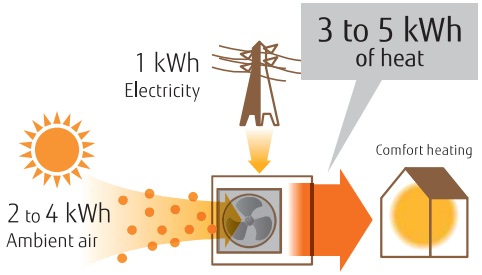


Split DHW Integrated type



What's a Heat Pump ?

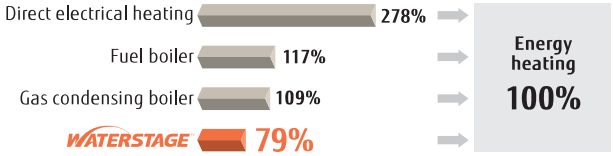
Absorbing free energy from the atmosphere. Heat Pump system requires only 1 kW of electricity to generate 3 to 5 kW thermal energy.



Primary Energy Usage Reduced Drastically!

Proportion of primary energy into heating energy of 100%

Primary Energy Consumption*



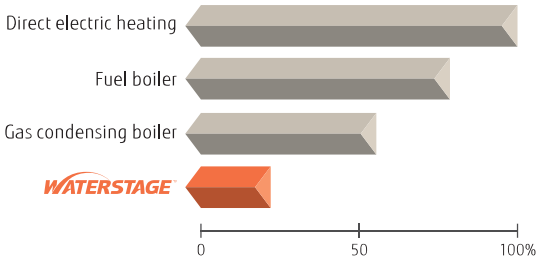
*Electricity loss is different due to power plant. Example efficiency of power plant: 36%

Benefits

Less
CO_2 Emissions

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

Average annual CO_2 emissions

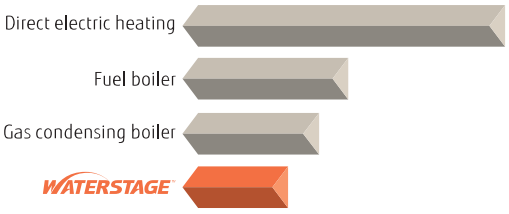


*Calculations based on data provided by European Program-2001` for EU 27
Fuel boiler efficiency: 89%, Gas boiler efficiency: 93%

Low
Running Cost

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

Average annual running cost



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

Clean
and Healthy

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

Easy
Installation and Maintenance

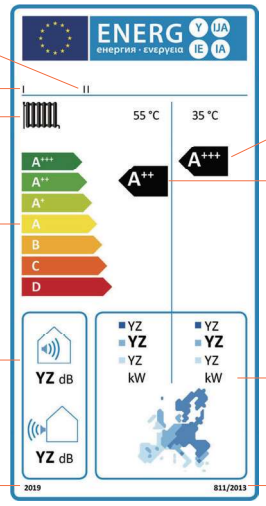
All components are built into compact outdoor unit or hydraulic indoor unit.

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

Energy Efficiency standard

Product labels

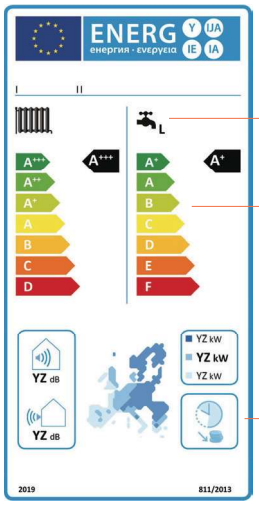
For Space heaters



Product identifier
Trade mark
Symbol for space heating
Scale of efficiency class, from A++ (highest efficiency) to G (lowest efficiency)
Sound power level outdoors and (where relevant) indoors
Year when label issued

Efficiency class in low temperature operation
Efficiency class in medium temperature operation
Temperature map of Europe with three climate zones and the rated heat output of each
Number of EU regulation

For Combination heaters



Symbol for hot water heating
Scale of efficiency class, from A (highest efficiency) to G (lowest efficiency) for hot water heating
Optional symbol where operation is possible only in off-peak periods

The Ecodesign Directive Lot 1 Regulation 813/2013

New Ecodesign directive defines a regulatory framework for improving the environmental performance of energy-related products (ErP) through design.
From 26 September 2015, the Ecodesign Directive will apply to space heaters(including heat pumps and fossil fuel boilers), combination heaters(for both space and water heating),water heaters and water storage tanks.
All these products will have to meet minimum requirements for energy efficiency*1 and maximum sound power levels. The minimum energy efficiency level will be raised from 26 September 2017 and maximum sound power level will be lowered on 26 September 2018.

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

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

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

Seasonal space heating
Energy efficiency class

	Except low temp HP 55°C	Low temp HP 35°C
A+++	ηs ≥ 150	ηs ≥ 175
A++	125 ≤ ηs < 150	150 ≤ ηs < 175
A+	98 ≤ ηs < 125	123 ≤ ηs < 150
A	90 ≤ ηs < 98	115 ≤ ηs < 123
B	82 ≤ ηs < 90	107 ≤ ηs < 115
C	75 ≤ ηs < 82	100 ≤ ηs < 107
D	36 ≤ ηs < 75	61 ≤ ηs < 100
E	34 ≤ ηs < 36	59 ≤ ηs < 61
F	30 ≤ ηs < 34	55 ≤ ηs < 59
G	ηs < 30	ηs < 55

EHPA Quality Label

Fujitsu General's WATERSTAGE*2 have obtained the EHPA Quality Label*3 by tests according to the international Standards EN14511 and EN17025. The EHPA Quality Label*3 is a label that shows the end-consumer a quality heat pump unit on the market.

*2: Only High Power 3 phase
*3: Check the validity of label at www.ehpa.org/quality/quality-label/

SG-Ready Label

SG-Ready is a defined standard by BWP*4, which makes it possible that the device can be integrated into a smart grid. Heat pumps, which are equipped with the SG-Ready Label, can receive signals from the power grid (and e.g. also from PV systems) about the available (unused renewable) energy (from wind, sun & water). Fujitsu General provides the SG-Ready compatibility to all new Heat Pumps Series.

*4: BWP = the Federal German Heat Pump Association

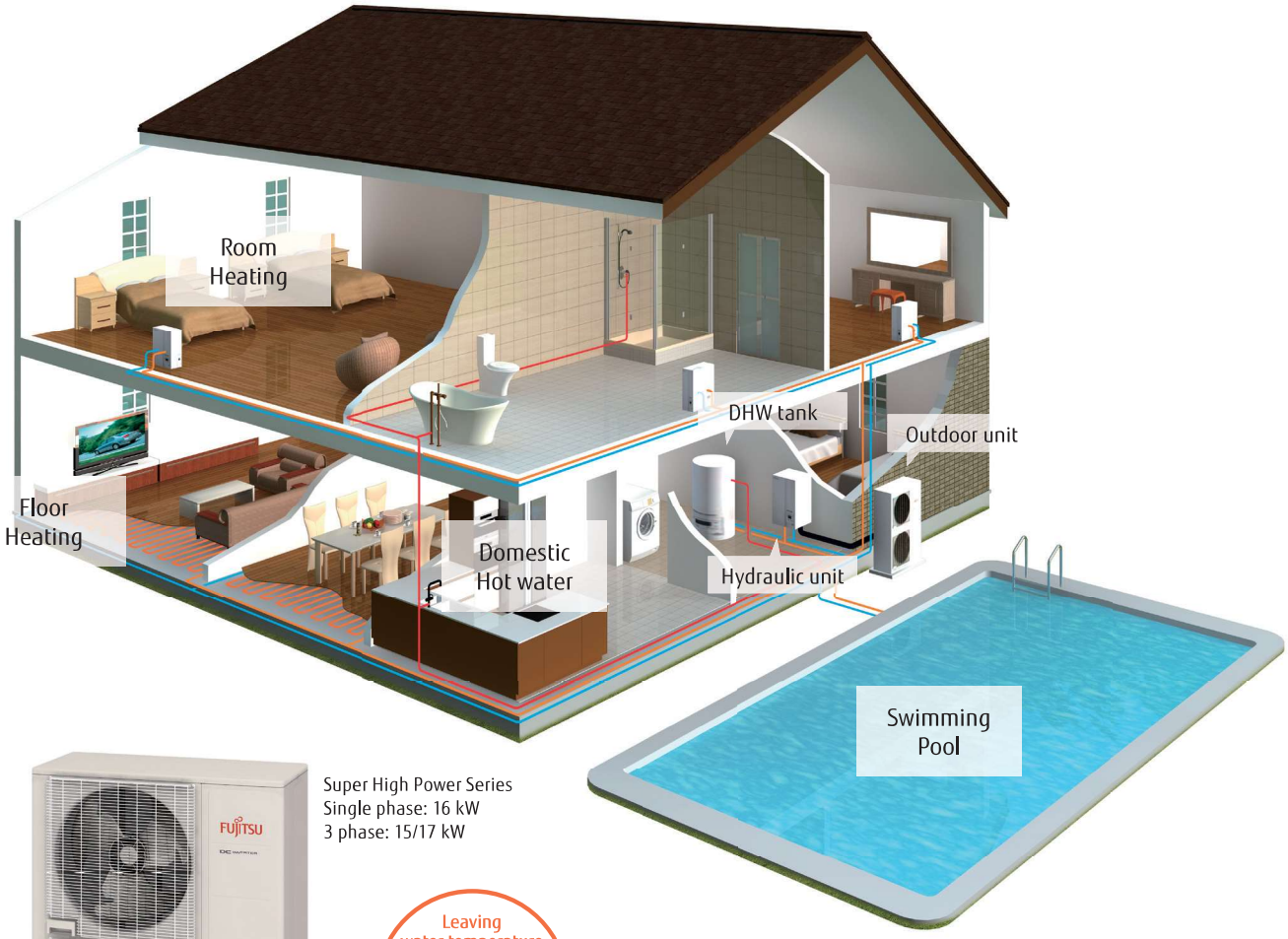
The CEN Heat Pump KEYMARK

The Heat Pump KEYMARK is a full certificate supporting the quality of heat pumps in the European market.
The Heat Pump KEYMARK is a voluntary, independent, European certification mark (ISO type 5 certification) for all heat pumps, combination heat pumps and hot water heaters (as covered by Ecodesign, EU Regulation 813/2013 and 814/2013). Fujitsu General's WATERSTAGE*5 have obtained the KEYMARK*6.

*5:Only R32 comfort model
*6:Check the validity of mark at www.heatpumpkeymark.com/about/

Home Heating
& Domestic Hot Water

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



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

Leaving water temperature
60°C

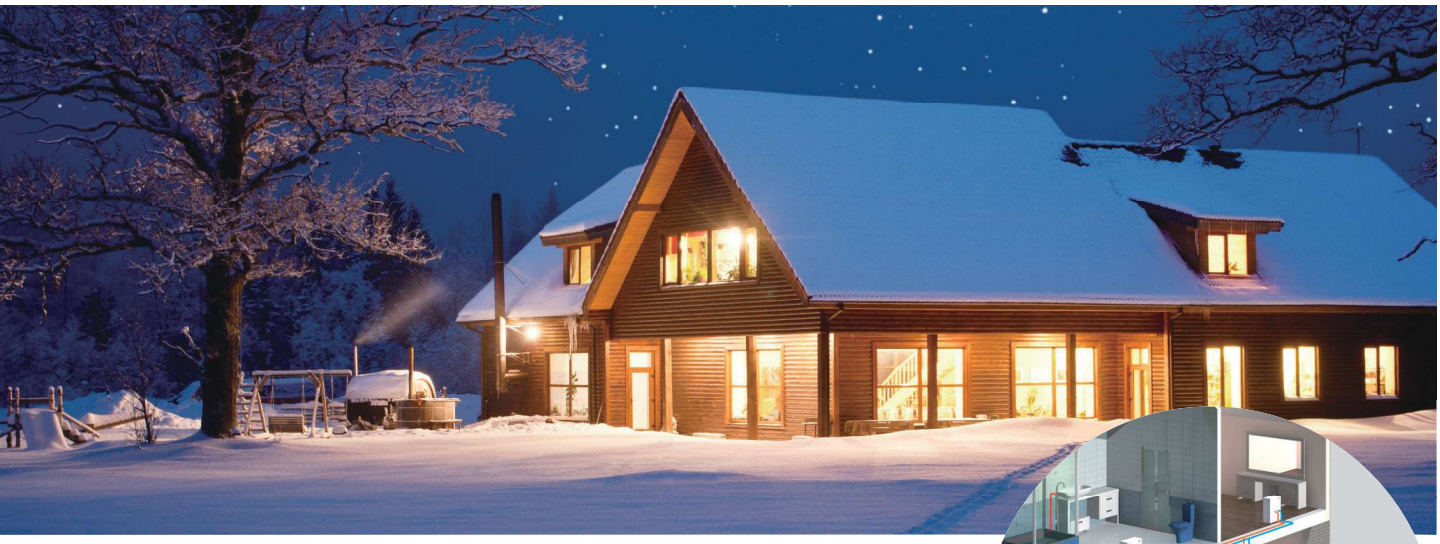
High leaving water temperature

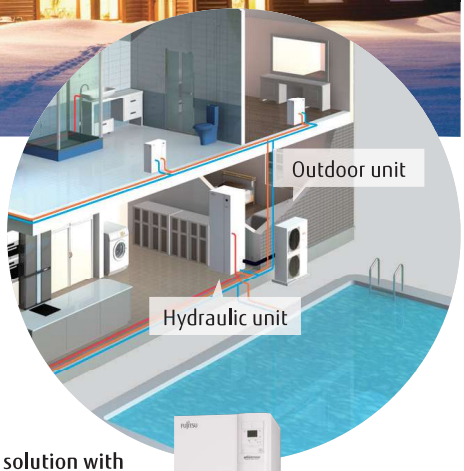
High leaving water temperature 60°C kept down to -20°C outdoor temperature without using backup heater.

For Room heating & domestic hot water

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

*1: For High Power only





Appearance-oriented compact outdoor unit

Split type Comfort Series

For Comfort Series, optimized flow temperature control is achieved by DC inverter technology.

*2: Outdoor Unit: WOYA060LFCA/WOYA080LFCA

Stylish space saving solution with built-in DHW tank

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

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

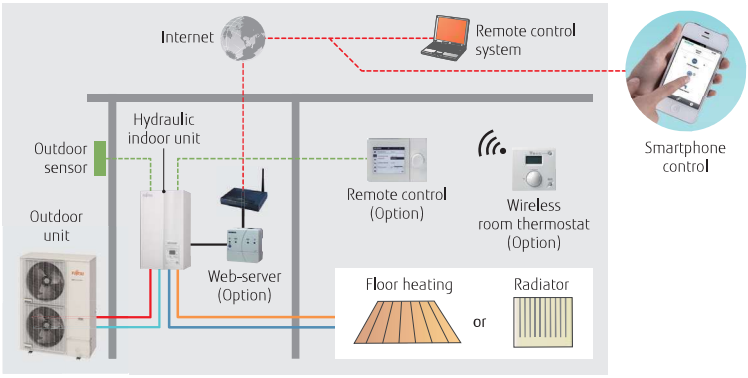
+ DHW Tank

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

+ Boiler

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

*Optional parts necessary



Smart control

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

High Efficiency Technology

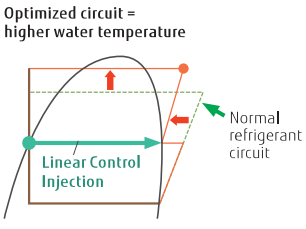
Twin Rotary Compressor

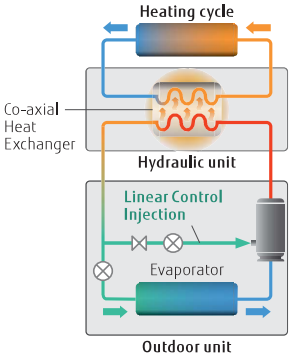
Linear Control Injection Port

For Outdoor Unit

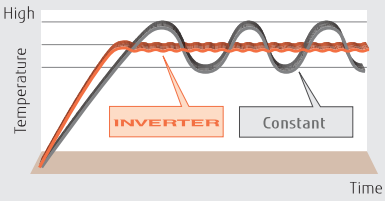
Twin Rotary Compressor with Linear Control Injection Port

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.

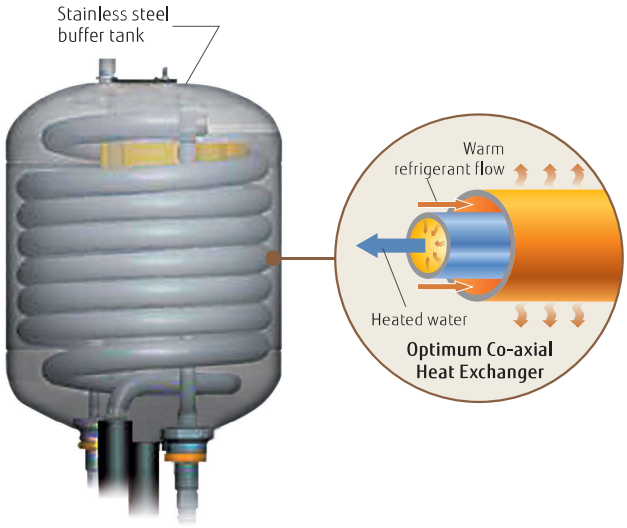




Accurate temperature control by DC inverter technology



High Durability Co-axial Heat Exchanger



For Hydraulic Indoor Unit

Stainless steel buffer tank

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

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

Class A++ Pump

Energy saving pump with constant volume or pressure adjustment function.

Energy efficiency class
WSYK170DJ9

WATERSTAGE™ Lineup

Type	Split type					
	Super High Power Series		High Power Series		Comfort Series	
Hydraulic indoor unit					NEW REFRIGERANT R32 	
Outdoor unit			 		NEW REFRIGERANT R32  	 
Capacity range	15/16/17 kW		11/14 kW	11/14/16 kW	5/6 kW	8 kW	5/6/8 kW	10 kW
System outline	• 60°C hot water supply even at -20°C outdoor temperature • 55°C hot water supply even at -22°C outdoor temperature • Different heating system can be used. Like underfloor heating, radiators and others.* • Heating and DHW in one system.* • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cooling operation is possible.* • Operation range is -25 to 35 °C.		• 60°C hot water supply even at -20°C outdoor temperature • Different heating system can be used. Like underfloor heating, radiators and others.* • Heating and DHW in one system.* • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cascade connection up to three systems.* • Cooling operation is possible.* • Operation range is -25 to 35 °C.		• 55°C hot water supply even at -10°C outdoor temperature • Heating and DHW in one system.* • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cooling operation is possible.* • Operation range is -25 to 35 °C.	• 55°C hot water supply even at -10°C outdoor temperature • Different heating system can be used. Like underfloor heating, radiators and others.* • Heating and DHW in one system.* • Additional electric heater for backup provided. • Up to two independent control circuits.* • Cooling operation is possible.* • Operation range is -25 to 35 °C.	
Power source	Single Phase, 230 V/50 Hz	3 Phase, 400 V/50 Hz	Single Phase, 230 V/50 Hz	3 Phase, 400 V/50 Hz	Single Phase, 230 V/50 Hz		Single Phase, 230 V/50 Hz	
Capacity 5 kW					WSYA050ML3 WOYA060KLT		WSYA050DG6 WOYA060LFCA	
Capacity 6 kW					WSYA080ML3 WOYA060KLT		WSYA100DG6 WOYA060LFCA	
Capacity 8 kW					WSYA080ML3 WOYA080KLT		WSYA100DG6 WOYA080LFCA	
Capacity 10 kW							WSYA100DG6 WOYA100LFTA	
Capacity 11 kW			WSYG140DG6 WOYG112LHT	WSYK160DG9 WOYK112LCTA				
Capacity 14 kW			WSYG140DG6 WOYG140LCTA	WSYK160DG9 WOYK140LCTA				
Capacity 15 kW		WSYK170DJ9 WOYK150LJL						
Capacity 16 kW	WSYG160DJ6 WOYG160LJL			WSYK160DG9 WOYK160LCTA				
Capacity 17 kW		WSYK170DJ9 WOYK170LJL						

SG Ready Smart Heat Pumps

Split DHW Integrated type

Super High Power Series

15/16/17 kW

- 60°C hot water supply even at -20°C outdoor temperature
- 55°C hot water supply even at -22°C outdoor temperature
- Different heating system can be used. Like underfloor heating, radiators and others.*
- Heating and DHW space saving in one hydraulic indoor unit.
- Additional electric heater for backup provided.
- Up to two independent control circuits.*
- Cooling operation is possible.*
- Operation range is -25 to 35 °C.

Single Phase, 230 V/50 Hz	3 Phase, 400 V/50 Hz
WGYG160DJ6 WOYG160LJL	
	WGYK170DJ9 WOYK170LJ

High Power Series

11/14 kW 11/14/16 kW

- 60°C hot water supply even at -20°C outdoor temperature
- Different heating system can be used. Like underfloor heating, radiators and others.*
- Heating and DHW space saving in one hydraulic indoor unit.
- Additional electric heater for backup provided.
- Up to two independent control circuits.*
- Cooling operation is possible.*
- Operation range is -25 to 35 °C.

Single Phase, 230 V/50 Hz	3 Phase, 400 V/50 Hz
WGYG140DG6 WOYG112LHT	WGYK160DG9 WOYK112LCTA
WGYG140DG6 WOYG140LCTA	WGYK160DG9 WOYK140LCTA
	WGYK160DG9 WOYK160LCTA

Comfort Series

NEW REFRIGERANT R32

NEW REFRIGERANT R32

5/6 kW 8 kW

- 55°C hot water supply even at -10°C outdoor temperature
- Heating and DHW in one system.*
- Additional electric heater for backup provided.
- Up to two independent control circuits.*
- Cooling operation is possible.*
- Operation range is -25 to 35 °C.

Single Phase, 230 V/50 Hz
WGYA050ML3 WOYA060KLT
WGYA080ML3 WOYA060KLT
WGYA080ML3 WOYA080KLT

Comfort Series

5/6/8 kW 10 kW

- 55°C hot water supply even at -10°C outdoor temperature
- Different heating system can be used. Like underfloor heating, radiators and others.*
- Heating and DHW space saving in one hydraulic indoor unit.
- Additional electric heater for backup provided.
- Up to two independent control circuits.*
- Cooling operation is possible.*
- Operation range is -25 to 35 °C.

Single Phase, 230 V/50 Hz
WGYA050DG6 WOYA060LFCA
WGYA100DG6 WOYA060LFCA
WGYA100DG6 WOYA080LFCA
WGYA100DG6 WOYA100LFTA

*Optional parts are required.

NEW

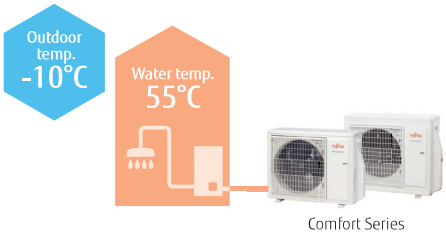
Split Type
Comfort Series

WATERSTAGE™

High Leaving Water Temperature

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

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



Comfort Series

High COP

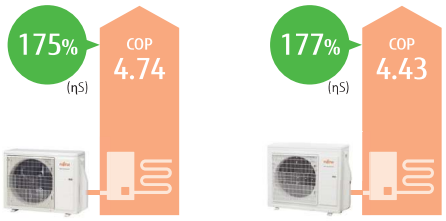
Waterstage Air to water heat pumps work much more efficient and save energy compared to traditional heating system.

Energy efficiency class A+++*

*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (η_S)

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



Single phase 5kW class

Single phase 8kW class

Outdoor unit technology

5 - 6 kW

8 kW

DC Fan Motor
High performance, high efficiency small DC fan motor mounted.

DC Twin Rotary Compressor
High efficient DC twin rotary compressor

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

Hydraulic indoor unit:
WSYA050ML3 / WSYA080ML3
Outdoor unit:
WOYA060KLT / WOYA080KLT

Hydraulic indoor unit
Single phase

Outdoor unit
Single phase
5/6kW

Outdoor unit
Single phase
8kW

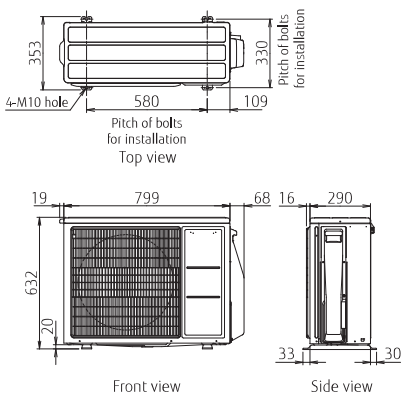
Specifications

Model Name	Hydraulic indoor unit		WSYA050ML3		WSYA080ML3		WSYA080ML3	
	Outdoor unit		WOYA060KLT		WOYA060KLT		WOYA080KLT	
Capacity range			5		6		8	
7°C/35°C floor heating *1	Heating capacity	kW	4.50		5.50		7.50	
	Input power		0.949		1.18		1.69	
	COP		4.74		4.65		4.43	
2°C/35°C floor heating *1	Heating capacity	kW	4.50		5.30		6.30	
	Input power		1.33		1.65		1.96	
	COP		3.39		3.22		3.21	
-7°C/35°C floor heating*1	Heating capacity	kW	4.40		5.00		5.70	
	Input power		1.59		1.90		2.13	
	COP		2.76		2.63		2.68	
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	5	5	5	6	6	7
Seasonal space heating energy efficiency(η_s)		%	125	175	125	175	128	177
Annual energy consumption		kWh	3,035	2,322	3,411	2,594	3,903	2,982
Sound power level*3	Hydraulic indoor unit	dB(A)	40	-	40	-	40	-
	Outdoor unit		57	-	57	-	60	-
Hydraulic indoor unit Specification								
Power source			Single phase 230 V 50 Hz					
Dimensions H×W×D		mm	847 x 450 x 493		847 x 450 x 493		847 x 450 x 493	
Weight (Net)		kg	41		41		41	
Water circulation	Min/Max	L/min	7.6/22.0		8.5/22.0		10.0/22.0	
Buffer tank capacity		L	16		16		16	
Expansion vessel capacity		L	8		8		8	
Leaving water temperature range	Max	°C	55		55		55	
Water pipe connection diameter	Flow/Return	mm	Ø 25.4/Ø 25.4		Ø 25.4/Ø 25.4		Ø 25.4/Ø 25.4	
Backup heater	Capacity	kW	3.0		3.0		3.0	
Outdoor unit specification								
Power source			Single phase 230 V 50 Hz					
Current	Max	A	13.0		13.0		18.0	
Dimensions H × W × D		mm	632 x 799 x 290		632 x 799 x 290		716 x 820 x 315	
Weight (Net)		kg	39		39		42	
Refrigerant	Type (Global Warming Potential)		R32(675)		R32(675)		R32(675)	
	Charge	kg	0.97		0.97		1.02	
Additional refrigerant charge amount		g/m	25		25		25	
Connection pipe – Diameter	Liquid	mm	6.35		6.35		6.35	
	Gas		12.70		12.70		12.70	
Connection pipe – Length	Min/Max	m	3/30		3/30		3/30	
Connection pipe – Length(Pre-charge)		m	15		15		15	
Connection pipe – Height difference	Max	m	20		20		20	
Operation range	Heating	°C	-20 to 35		-20 to 35		-20 to 35	

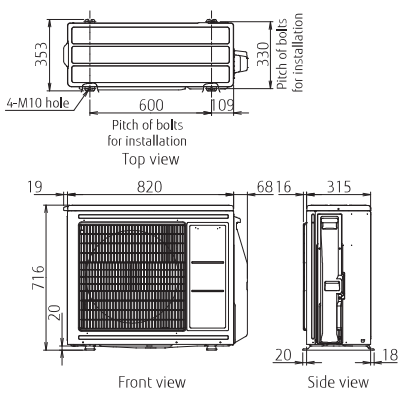
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
*2:All information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

Dimensions

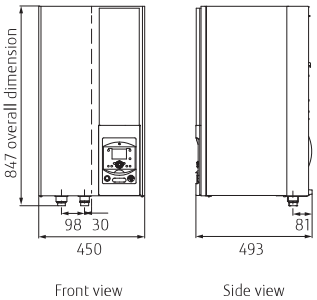
Outdoor Unit:
WOYA060KLT



WOYA080KLT



Hydraulic Indoor Unit:
WSYA050ML3/WSYA080ML3



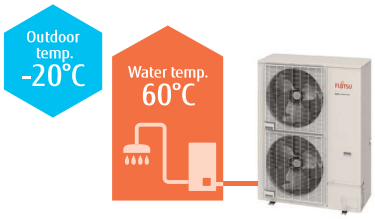
Split Type
Super High Power Series

WATERSTAGE™

High Leaving Water Temperature

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

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



Super High Power Series

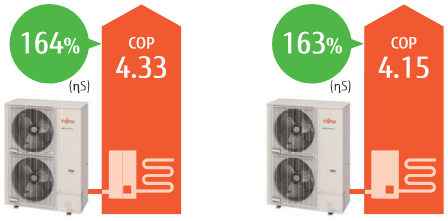
High COP

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

Energy efficiency class A++

Seasonal space heating energy efficiency (η_s)

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



3 phase
15kW class

Single phase
16kW class

Extended Operation Range down to -25°C

Improved operation range down to -25°C outdoor temperature

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

Hydraulic indoor unit
Single phase/
3 phase

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

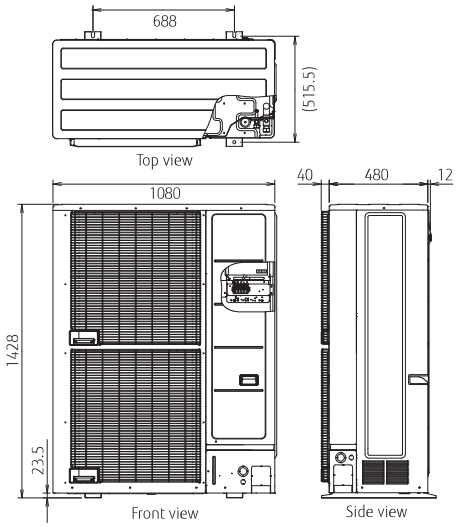
Specifications

Model Name	Hydraulic indoor unit		WSYG160DJ6		WSYK170DJ9		WSYK170DJ9	
	Outdoor unit		WOYG160LJL		WOYK150LJL		WOYK170LJL	
Capacity range			16		15		17	
7°C/35°C floor heating *1	Heating capacity	kW	16.00		15.00		17.00	
	Input power		3.86		3.46		4.10	
	COP		4.15		4.33		4.15	
2°C/35°C floor heating *1	Heating capacity	kW	13.30		13.20		13.50	
	Input power		4.25		4.06		4.27	
	COP		3.13		3.25		3.16	
-7°C/35°C floor heating*1	Heating capacity	kW	14.50		13.20		15.00	
	Input power		5.27		4.55		5.32	
	COP		2.75		2.90		2.82	
Space heating characteristics*2								
Temperature application		°C	55	35	55	35	55	35
Energy efficiency class			A++	A++	A++	A++	A++	A++
Rated heat output(P_{rated})		kW	14	16	16	17	17	18
Seasonal space heating energy efficiency(η_s)		%	125	163	130	164	130	161
Annual energy consumption		kWh	8,757	8,014	9,915	8,606	10,232	9,059
Sound power level	Hydraulic indoor unit	dB(A)	45	45	45	45	45	45
	Outdoor unit		67	66	67	66	67	68
Hydraulic indoor unit Specification								
Power source			Single phase, 230 V 50 Hz		3 phase, 400 V 50 Hz			
Dimensions H×W×D		mm	805 × 450 × 471		805 × 450 × 471			
Weight (Net)		kg	52.5		52.5			
Water circulation	Min/Max	L/min	26.4/57.8		24.0/54.2		27.3/61.4	
Buffer tank capacity		L	25		25			
Expansion vessel capacity		L	10		10			
Leaving water temperature range	Max	°C	60		60			
Water pipe connection diameter	Flow/Return	mm	Ø 25.4/Ø 25.4		Ø 25.4/Ø 25.4			
Backup heater	Capacity	kW	6.0(3.0kW×2pcs.)		9.0(3.0kW×3pcs.)			
Outdoor unit specification								
Power source			Single phase, 230 V 50 Hz		3 phase, 400 V 50 Hz			
Current	Max	A	28.00		14.0		14.0	
Dimensions H × W × D		mm	1,428 × 1,080 × 480		1,428 × 1,080 ×480		1,428 × 1,080 ×480	
Weight (Net)		kg	137		138		138	
Refrigerant	Type (Global Warming Potential)		R410A (2,088)					
	Charge	kg	3.80		3.80		3.80	
Additional refrigerant charge amount		g/m	50		50		50	
Connection pipe – Diameter	Liquid	mm	Ø 9.52		Ø 9.52		Ø 9.52	
	Gas		Ø 15.88		Ø 15.88		Ø 15.88	
Length	Min/Max	m	5/30		5/30		5/30	
Length(Pre-charge)		m	15		15		15	
Height difference	Max	m	25/15 (Outdoor unit:Upper/Lower)					
Operation range	Heating	°C	-25 to 35		-25 to 35		-25 to 35	

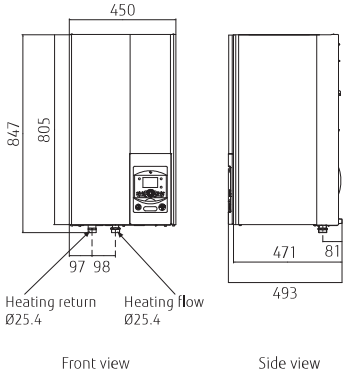
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
*2:All information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

Dimensions

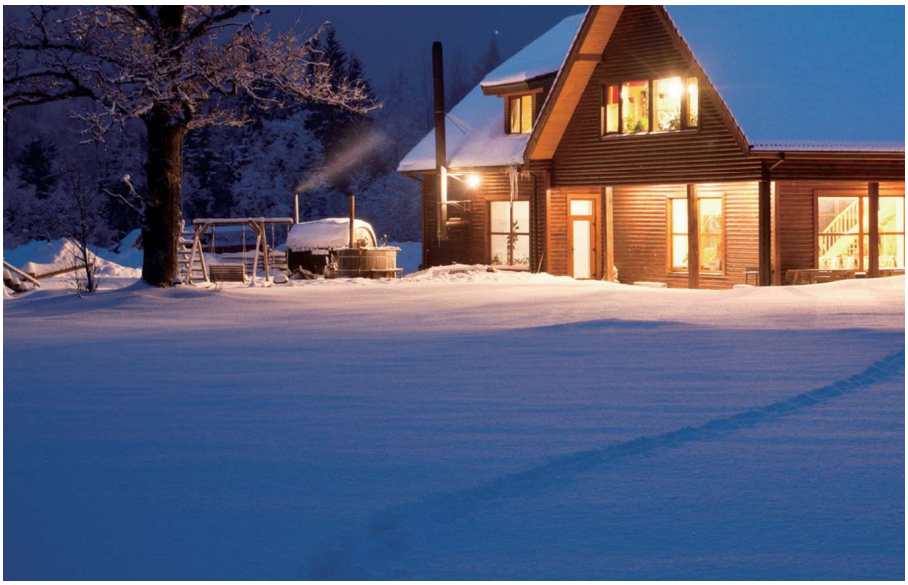
Outdoor Unit:
Single phase: WOYG160LJL
3 phase: WOYK150LJL/WOYK170LJL



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



Split Type
High Power Series



WATERSTAGE™

High Leaving Water Temperature

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

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

High Power Series

High COP

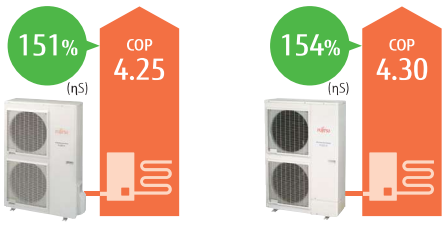
Waterstage Air to water heat pumps work much more efficient and save energy compared to traditional heating system.

Energy efficiency class A++ *

*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (η_S)

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



Single phase
11kW class

3 phase
11kW class

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

Hydraulic indoor unit
Single phase/
3 phase

Outdoor unit
Single phase
11/14 kW

Outdoor unit
3 phase
11/14/16 kW

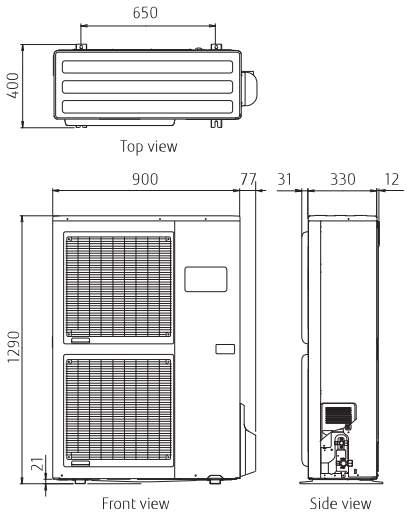
Specifications

Model Name	Hydraulic indoor unit		WSYG140DG6		WSYG140DG6		WSYK160DG9		WSYK160DG9		WSYK160DG9	
	Outdoor unit		WOYG112LHT		WOYG140LCTA		WOYK112LCTA		WOYK140LCTA		WOYK160LCTA	
Capacity range			11		14		11		14		16	
7°C/35°C floor heating *1	Heating capacity	kW	10.80		13.50		10.80		13.50		15.17	
	Input power		2.54		3.23		2.51		3.20		3.70	
	COP		4.25		4.18		4.30		4.22		4.10	
2°C/35°C floor heating *1	Heating capacity	kW	10.77		12.00		10.77		13.00		13.50	
	Input power		3.44		3.87		3.40		4.15		4.34	
	COP		3.13		3.10		3.17		3.13		3.11	
-7°C/35°C floor heating*1	Heating capacity	kW	10.38		11.54		10.38		12.20		13.50	
	Input power		4.32		5.08		4.28		5.13		5.40	
	COP		2.40		2.27		2.43		2.38		2.50	
Space heating characteristics*2												
Temperature application		°C	55	35	55	35	55	35	55	35	55	35
Energy efficiency class			A+	A++	A+	A+	A+	A++	A+	A++	A+	A+
Rated heat output(P_{rated})		kW	9	11	11	13	9	11	11	13	13	14
Seasonal space heating energy efficiency(η_s)		%	112	151	113	148	112	154	117	150	117	149
Annual energy consumption		kWh	6,704	6,062	8,041	6,824	6,669	5,930	7,803	6,738	9,062	7,408
Sound power level	Hydraulic indoor unit	dB(A)	46		46		46		46		46	
	Outdoor unit		68		69		69	68	70	68	71	
Hydraulic indoor unit Specification												
Power source			Single phase, 230 V 50 Hz				3 phase, 400 V 50 Hz					
Dimensions H×W×D		mm	800 × 450 × 457				800 × 450 × 457					
Weight (Net)		kg	42				42					
Water circulation	Min/Max	L/min	19.5/39.0		24.4/48.7		19.5/39.0		24.4/48.7		27.4/54.8	
Buffer tank capacity		L	16				16					
Expansion vessel capacity		L	8				8					
Leaving water temperature range	Max	°C	60				60					
Water pipe connection diameter	Flow/Return	mm	Ø 25.4/Ø 25.4				Ø 25.4/Ø 25.4					
Backup heater	Capacity	kW	6.0(3.0kW×2pcs.)				9.0(3.0kW×3pcs.)					
Outdoor unit specification												
Power source			Single phase, 230 V 50 Hz				3 phase, 400 V 50 Hz					
Current	Max	A	22.0		25.0		9.0		9.5		10.5	
Dimensions H × W × D		mm	1,290 × 900 ×330									
Weight (Net)		kg	92				99					
Refrigerant	Type (Global Warming Potential)		R410A (2,088)									
	Charge	kg	2.50									
Additional refrigerant charge amount		g/m	50									
Connection pipe – Diameter	Liquid	mm	Ø 9.52									
	Gas		Ø 15.88									
Length	Min/Max	m	5/20									
Length(Pre-charge)		m	15									
Height difference	Max	m	15									
Operation range	Heating	°C	-25 to 35									

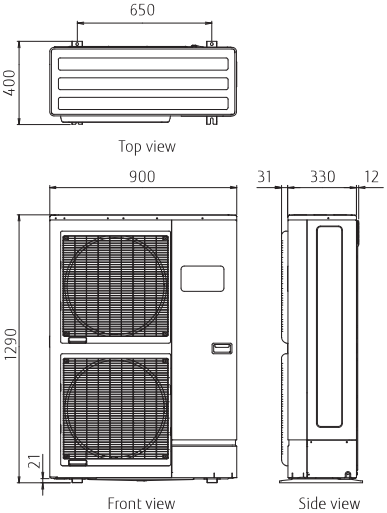
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
*2:All information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

Dimensions

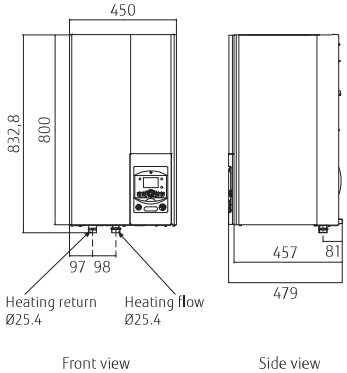
Outdoor Unit:
Single phase: WOYG112LHT/WOYG140LCTA



3 phase: WOYK112LCTA/WOYK140LCTA/WOYK160LCTA



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



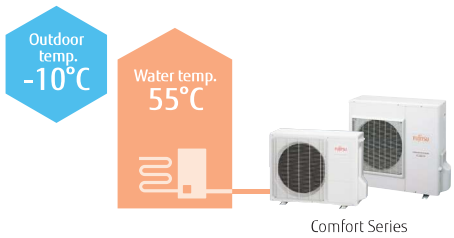
Split Type
Comfort Series

WATERSTAGE™

High Leaving Water Temperature

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

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



Comfort Series

High COP

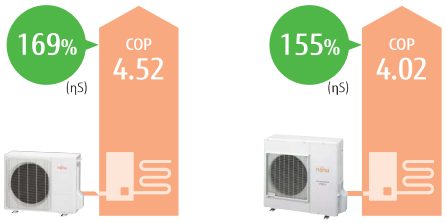
Waterstage Air to water heat pumps work much more efficient and save energy compared to traditional heating system.

Energy efficiency class **A++ ***

*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (η_s)

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



Single phase 5kW class

Single phase 10kW class

Outdoor unit technology

5 - 8 kW

10 kW

DC Fan Motor
High performance, high efficiency small DC fan motor mounted.

DC Twin Rotary Compressor
High efficient DC twin rotary compressor

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

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

Hydraulic indoor unit
Single phase

Outdoor unit
Single phase
5/6/8kW

Outdoor unit
Single phase
10kW

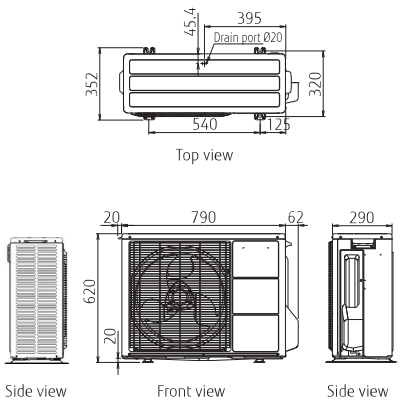
Specifications

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	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	3,026 / 2,160	3,180 / 2,505	3,886 / 3,375	5,415 / 4,415
Sound power level	Hydraulic indoor unit	dB(A)	46	46	46	46
	Outdoor unit		65 / 60	65 / 63	65 / 69	68 / 69
Hydraulic indoor unit Specification						
Power source			Single phase 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			Single phase 230 V 50 Hz			
Current	Max	A	12.5		17.5	18.5
Dimensions H × W × D		mm	620 × 790 ×290			830 × 900 × 330
Weight (Net)		kg	41		42	60
Refrigerant	Type (Global Warming Potential)		R410A (2,088)			
	Charge	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 12.7		Ø 15.88	
Length	Min/Max	m	5/30			
Length(Pre-charge)		m	15			
Height difference	Max	m	20			
Operation range	Heating	°C	-20 to 35			

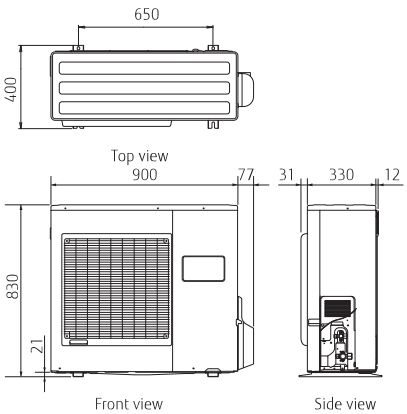
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
*2:All information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

Dimensions

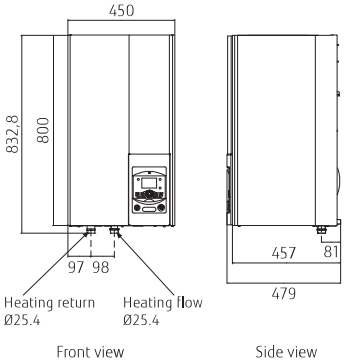
Outdoor Unit:
WOYA060LFCA/WOYA080LFCA



WOYA100LFTA



Hydraulic Indoor Unit:
WSYA050DG6/WSYA100DG6



NEW

Split DHW Integrated Type

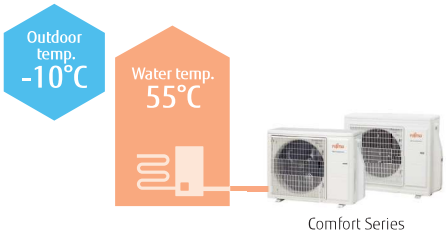
Comfort Series

WATERSTAGE™

High Leaving Water Temperature

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

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



Comfort Series

High COP

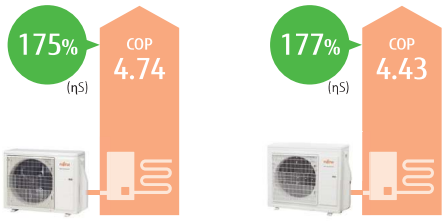
Waterstage Air to water heat pumps work much more efficient and save energy compared to traditional heating system.

Energy efficiency class A+++*

*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (η_s)

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



Single phase 5kW class

Single phase 8kW class

Outdoor unit technology

5 - 6 kW

8 kW

DC Fan Motor
High performance, high efficiency small DC fan motor mounted.

DC Twin Rotary Compressor
High efficient DC twin rotary compressor

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

Hydraulic indoor unit:
WGYA050ML3 / WGYA080ML3
Outdoor unit:
WOYA060KLT / WOYA080KLT

Hydraulic indoor unit
Single phase

Outdoor unit
Single phase
5/6kW

Outdoor unit
Single phase
8kW

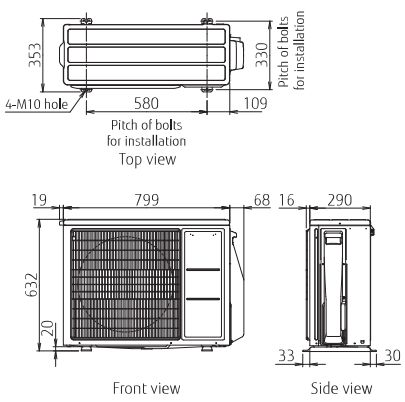
Specifications

Model Name	Hydraulic indoor unit		WGYA050ML3		WGYA080ML3		WGYA080ML3	
	Outdoor unit		WOYA060KLT		WOYA060KLT		WOYA080KLT	
Capacity range			5		6		8	
7°C/35°C floor heating *1	Heating capacity	kW	4.50		5.50		7.50	
	Input power		0.949		1.18		1.69	
	COP		4.74		4.65		4.43	
2°C/35°C floor heating *1	Heating capacity	kW	4.50		5.30		6.30	
	Input power		1.33		1.65		1.96	
	COP		3.39		3.22		3.21	
-7°C/35°C floor heating*1	Heating capacity	kW	4.40		5.00		5.70	
	Input power		1.59		1.90		2.13	
	COP		2.76		2.63		2.68	
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	5	5	5	6	6	7
Seasonal space heating energy efficiency(η_s)		%	125	175	125	175	128	177
Annual energy consumption		kWh	3,035	2,322	3,411	2,594	3,903	2,982
Sound power level*3	Hydraulic indoor unit	dB(A)	40	-	40	-	40	-
	Outdoor unit		57	-	57	-	60	-
Domestic hot water characteristics*2								
Load profile			L		L		L	
Energy efficiency class			A+		A+		A+	
Energy efficiency(η_{wh})		%	130		130		130	
Annual electricity consumption		kWh	793		793		793	
Hydraulic indoor unit Specification								
Power source			Single phase 230 V 50 Hz					
Dimensions H×W×D		mm	1,863 x 648 x 700		1,863 x 648 x 700		1,863 x 648 x 700	
Weight (Net)		kg	143		143		143	
Water circulation		L/min	7.6/22.0		8.5/22.0		10.0/22.0	
DHW capacity		L	190		190		190	
Hot water heater capacity		kW	1.5		1.5		1.5	
Buffer tank capacity		L	16		16		16	
Expansion vessel capacity		L	8		8		8	
Leaving water temperature range	Max	°C	55		55		55	
Water pipe connection diameter	Flow/Return	mm	Ø 25.4/Ø 25.4		Ø 25.4/Ø 25.4		Ø 25.4/Ø 25.4	
Hot water pipe connection diameter		mm	Ø 19.05		Ø 19.05		Ø 19.05	
Backup heater	Capacity	kW	3.0		3.0		3.0	
Outdoor unit specification								
Power source			Single phase 230 V 50 Hz					
Current	Max	A	13.0		13.0		18.0	
Dimensions H × W × D		mm	632 x 799 x 290		632 x 799 x 290		716 x 820 x 315	
Weight (Net)		kg	39		39		42	
Refrigerant	Type (Global Warming Potential)		R32(675)		R32(675)		R32(675)	
	Charge	kg	0.97		0.97		1.02	
Additional refrigerant charge amount		g/m	25		25		25	
Connection pipe – Diameter	Liquid	mm	6.35		6.35		6.35	
	Gas		12.70		12.70		12.70	
Connection pipe – Length	Min/Max	m	3/30		3/30		3/30	
Length(Pre-charge)		m	15		15		15	
Height difference	Max	m	20		20		20	
Operation range	Heating	°C	-20 to 35		-20 to 35		-20 to 35	

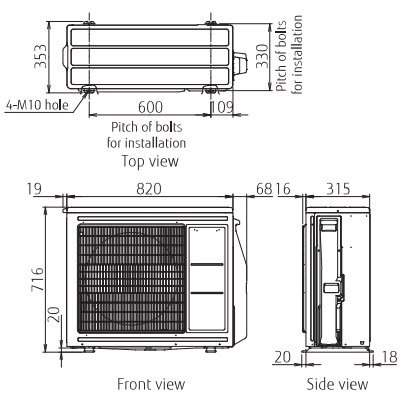
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
*2:All information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

Dimensions

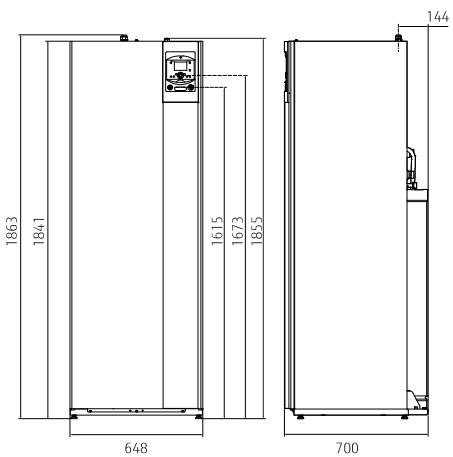
Outdoor Unit:
WOYA060KLT



WOYA080KLT

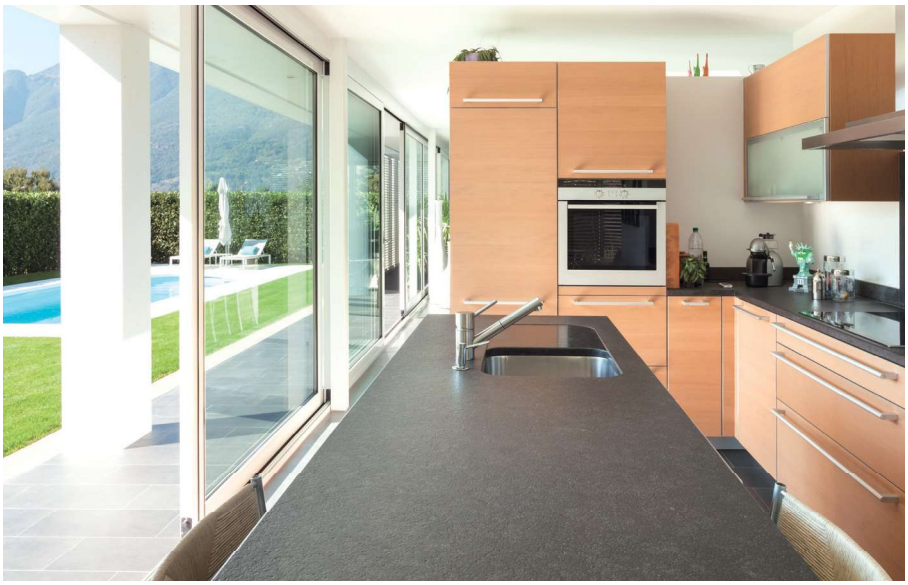


Hydraulic Indoor Unit:
WGYA050ML3/WGYA080ML3



Split DHW Integrated Type

Super High Power Series

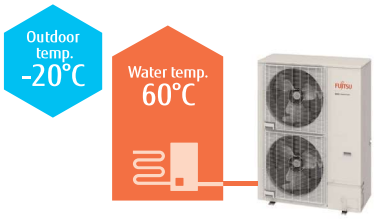


WATERSTAGE™

High Leaving Water Temperature

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

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



Super High Power Series

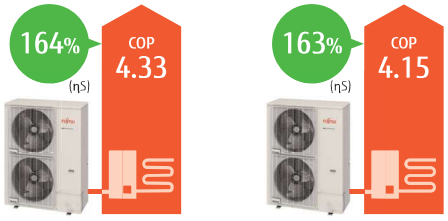
High COP

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

Energy efficiency class

Seasonal space heating energy efficiency (η_S)

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



3 phase
15kW class

Single phase
16kW class

Extended Operation Range down to -25°C

Improved operation range down to -25°C outdoor temperature

Stylish space saving solution with

Built in High Performance DHW Tank 190 L

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

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

Hydraulic indoor unit
Single phase/
3 phase

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

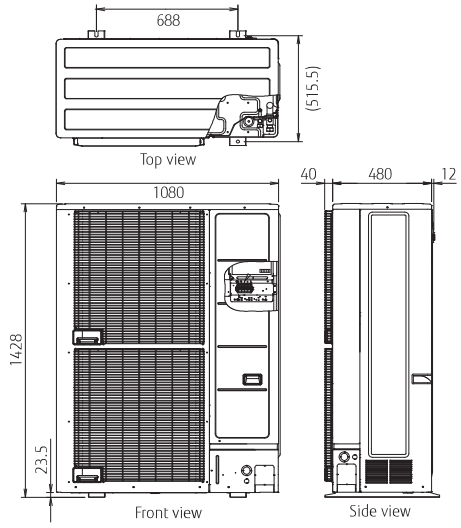
Specifications

Model Name	Hydraulic indoor unit		WGYG160DJ6		WGYK170DJ9		WGYK170DJ9	
	Outdoor unit		WOYG160LJL		WOYK150LJL		WOYK170LJL	
Capacity range			16		15		17	
7°C/35°C floor heating *1	Heating capacity	kW	16.00		15.00		17.00	
	Input power		3.86		3.46		4.10	
	COP		4.15		4.33		4.15	
2°C/35°C floor heating *1	Heating capacity	kW	13.30		13.20		13.50	
	Input power		4.25		4.06		4.27	
	COP		3.13		3.25		3.16	
-7°C/35°C floor heating*1	Heating capacity	kW	14.50		13.20		15.00	
	Input power		5.27		4.55		5.32	
	COP		2.75		2.90		2.82	
Space heating characteristics*2								
Temperature application		°C	55	35	55	35	55	35
Energy efficiency class			A++	A++	A++	A++	A++	A++
Rated heat output(P_{rated})		kW	14	16	16	17	17	18
Seasonal space heating energy efficiency(η_s)		%	125	163	130	164	130	161
Annual energy consumption		kWh	8,757	8,014	9,915	8,606	10,232	9,059
Sound power level	Hydraulic indoor unit	dB(A)	45	45	45	45	45	45
	Outdoor unit		67	66	67	66	67	68
Domestic hot water characteristics*2								
Load profile			L					
Energy efficiency class			A					
Energy efficiency(η_{wh})		%	109					
Annual electricity consumption		kWh	941					
Hydraulic indoor unit Specification								
Power source			Single phase, 230 V 50 Hz		3 phase, 400 V 50 Hz			
Dimensions H×W×D		mm	1,841 × 648 × 698					
Weight (Net)		kg	166					
Water circulation		L/min	26.4/57.8		24.0/54.2		27.3/61.4	
DHW capacity		L	190					
Hot water heater capacity		kW	1.5					
Buffer tank capacity		L	25					
Expansion vessel capacity		L	12					
Leaving water temperature range	Max	°C	60					
Water pipe connection diameter	Flow/Return	mm	Ø 25.4/Ø 25.4					
Hot water pipe connection diameter		mm	Ø 19.05					
Backup heater	Capacity	kW	6.0(3.0kW×2pcs.)		9.0(3.0kW×3pcs.)			
Outdoor unit specification								
Power source			Single phase, 230 V 50 Hz		3 phase, 400 V 50 Hz			
Current	Max	A	28.0		14.0			
Dimensions H × W × D		mm	1,428 × 1,080 × 480		1,428 × 1,080 × 480			
Weight (Net)		kg	137		138			
Refrigerant	Type (Global Warming Potential)		R410A (2,088)		R410A (2,088)			
	Charge	kg	3.80		3.80			
Additional refrigerant charge amount		g/m	50		50			
Connection pipe – Diameter	Liquid	mm	Ø 9.52		Ø 9.52			
	Gas		Ø 15.88		Ø 15.88			
Connection pipe – Length	Min/Max	m	5/30		5/30			
Connection pipe – Length(Pre-charge)		m	15		15			
Connection pipe – Height difference	Max	m	25/15 (Outdoor unit:Upper/Lower)		25/15 (Outdoor unit:Upper/Lower)			
Operation range	Heating	°C	-25 to 35		-25 to 35			

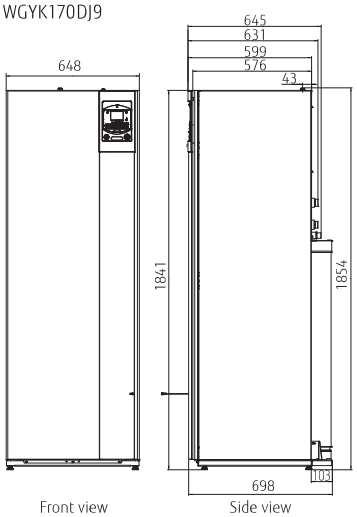
*1:The values of heating capacity/input power/COP are based on EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
*2:All information of ErP can be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

Dimensions

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

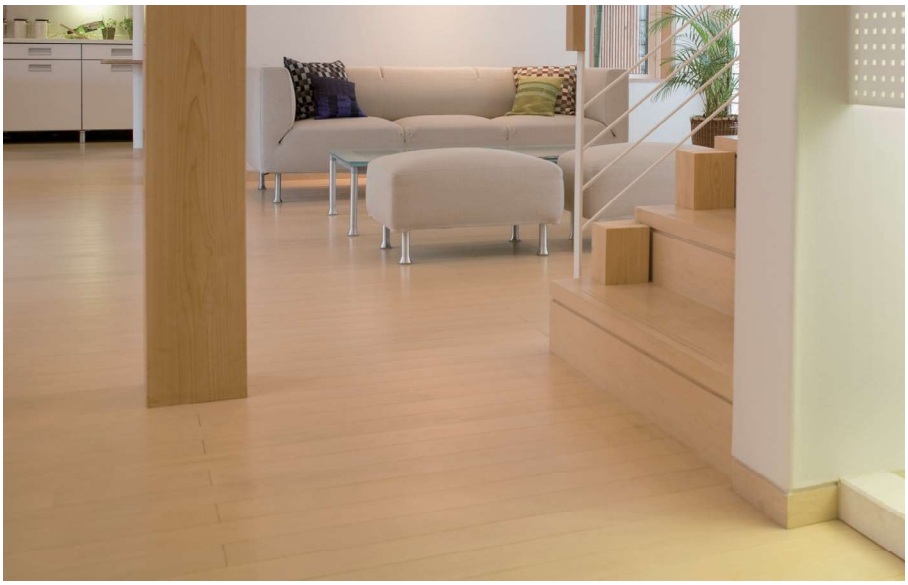


Hydraulic Indoor Unit:
Single phase: WGYG160DJ6
3 phase: WGYK170DJ9



Split DHW Integrated Type

High Power Series

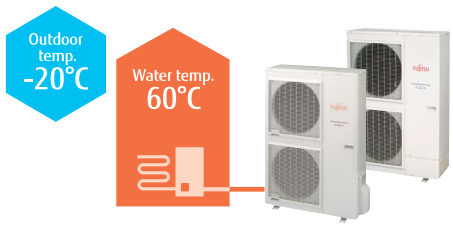


WATERSTAGE™

High Leaving Water Temperature

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

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



High Power Series

High COP

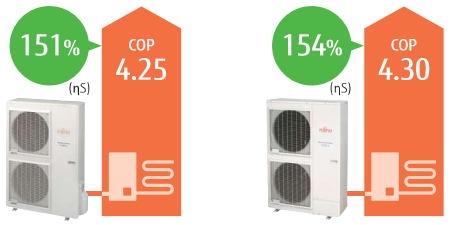
Waterstage Air to water heat pumps work much more efficient and save energy compared to traditional heating system.

Energy efficiency class A++ *

*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (η_S)

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

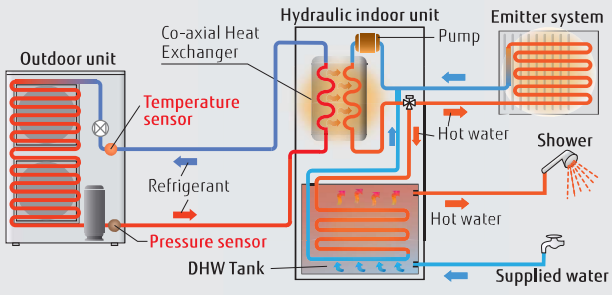


Single phase 11kW class

3 phase 11kW class

Optimization of refrigerant cycle operation

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



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

Hydraulic indoor unit
Single phase/
3 phase

Outdoor unit
Single phase
11/14 kW

Outdoor unit
3 phase
11/14/16 kW

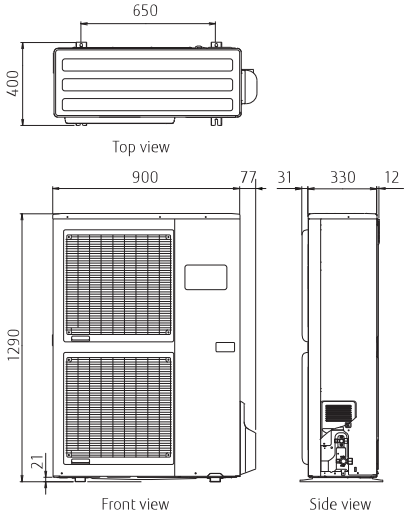
Specifications

Model Name		Hydraulic indoor unit		WGYG140DG6		WGYG140DG6		WGYK160DG9		WGYK160DG9		WGYK160DG9	
		Outdoor unit		WOYG112LHT		WOYG140LCTA		WOYK112LCTA		WOYK140LCTA		WOYK160LCTA	
Capacity range				11		14		11		14		16	
7°C/35°C floor heating *1		Heating capacity	kW	10.80		13.50		10.80		13.50		15.17	
		Input power		2.54		3.23		2.51		3.20		3.70	
		COP		4.25		4.18		4.30		4.22		4.10	
2°C/35°C floor heating *1		Heating capacity	kW	10.77		12.00		10.77		13.00		13.50	
		Input power		3.44		3.87		3.40		4.15		4.34	
		COP		3.13		3.10		3.17		3.13		3.11	
-7°C/35°C floor heating*1		Heating capacity	kW	10.38		11.54		10.38		12.20		13.50	
		Input power		4.32		5.08		4.28		5.13		5.40	
		COP		2.40		2.27		2.43		2.38		2.50	
Space heating characteristics*2													
Temperature application			°C	55	35	55	35	55	35	55	35	55	35
Energy efficiency class				A+	A++	A+	A+	A+	A++	A+	A++	A+	A+
Rated heat output(P_{rated})			kW	9	11	11	13	9	11	11	13	13	14
Seasonal space heating energy efficiency(η_s)			%	112	151	113	148	112	154	117	150	117	149
Annual energy consumption			kWh	6,704	6,062	8,041	6,824	6,669	5,930	7,803	6,738	9,062	7,408
Sound power level		Hydraulic indoor unit	dB(A)	46		46		46		46		46	
		Outdoor unit		68		69		69	68	70	68	71	
Domestic hot water characteristics*2													
Load profile				L									
Energy efficiency class				A									
Energy efficiency(η_{wh})			%	88									
Annual electricity consumption			kWh	1166									
Hydraulic indoor unit Specification													
Power source				Single phase 230 V 50 Hz				3 phase, 400 V 50 Hz					
Dimensions H×W×D			mm	1,840× 648 × 698									
Weight (Net)			kg	152									
Water circulation			L/min	19.5/39.0		24.4/28.7		19.5/39.0		24.4/48.7		27.4/54.8	
DHW capacity			L	190									
Hot water heater capacity			kW	1.5									
Buffer tank capacity			L	16									
Expansion vessel capacity			L	12									
Leaving water temperature range		Max	°C	60									
Water pipe connection diameter		Flow/Return	mm	Ø 25.4/Ø 25.4									
Hot water pipe connection diameter			mm	Ø 19.05									
Backup heater		Capacity	kW	6.0(3.0kW×2pcs.)				9.0(3.0kW×3pcs.)					
Outdoor unit specification													
Power source				Single phase 230 V 50 Hz				3 phase, 400 V 50 Hz					
Current		Max	A	22.0		25.0		9.0		9.5		10.5	
Dimensions H × W × D			mm	1,290 × 900 ×330									
Weight (Net)			kg	92				99					
Refrigerant		Type (Global Warming Potential)		R410A (2,088)									
		Charge	kg	2.50									
Additional refrigerant charge amount			g/m	50									
Connection pipe	Diameter	Liquid	mm	Ø 9.52									
		Gas		Ø 15.88									
	Length	Min/Max	m	5/20									
	Length(Pre-charge)		m	15									
	Height difference	Max	m	15									
Operation range		Heating	°C	-25 to 35									

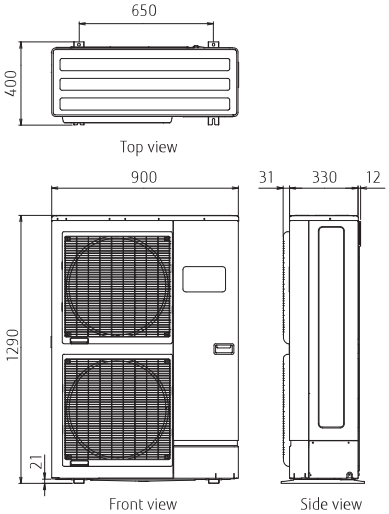
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
*2:All information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

Dimensions

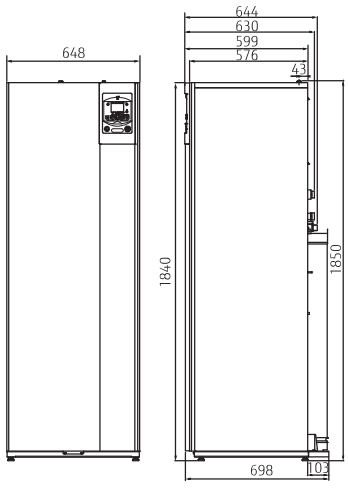
Outdoor Unit:
Single phase: WOYG112LHT/WOYG140LCTA



3 phase: WOYK112LCTA/WOYK140LCTA/WOYK160LCTA



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



Split DHW Integrated Type

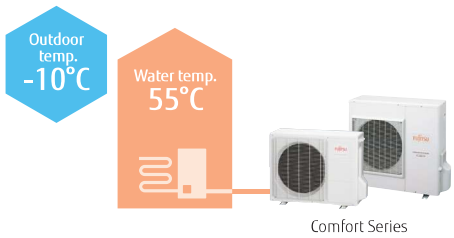
Comfort Series

WATERSTAGE™

High Leaving Water Temperature

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

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



Comfort Series

High COP

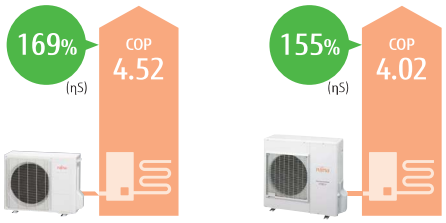
Waterstage Air to water heat pumps work much more efficient and save energy compared to traditional heating system.

Energy efficiency class A++ *

*Temperature application : Heating Temp. 35°C.

Seasonal space heating energy efficiency (η_S)

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



Single phase 5kW class

Single phase 10kW class

Outdoor unit technology

5 - 8 kW

10 kW

DC Fan Motor
High performance, high efficiency small DC fan motor mounted.

DC Twin Rotary Compressor
High efficient DC twin rotary compressor

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

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

Hydraulic indoor unit
Single phase

Outdoor unit
Single phase
5/6/8kW

Outdoor unit
Single phase
10kW

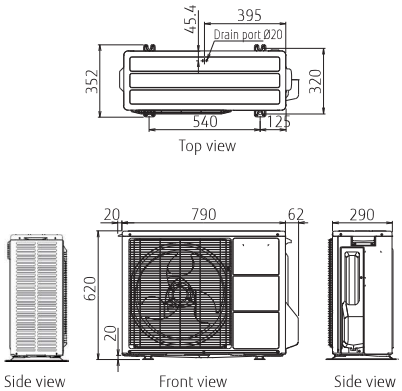
Specifications

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	3,026 / 2,160	3,180 / 2,505	3,886 / 3,375	5,415 / 4,415
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(ηwh)		%	120			
Annual electricity consumption		kWh	880			
Hydraulic indoor unit Specification						
Power source			Single phase 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			
Buffer tank capacity		L	16			
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			Single phase 230 V 50 Hz			
Current	Max	A	12.5		17.5	18.5
Dimensions H × W × D		mm	620 × 790 ×290			830 × 900 ×330
Weight (Net)		kg	41		42	60
Refrigerant	Type (Global Warming Potential)		R410A (2,088)			
	Charge	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	
Connection pipe – Length	Min/Max	m	5/30			
Connection pipe – Length(Pre-charge)		m	15			
Connection pipe – Height difference	Max	m	20			
Operation range	Heating	°C	-20 to 35			

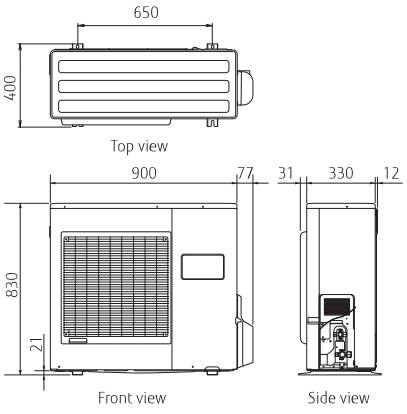
*1:The values of heating capacity/input power/COP are based on measurement of EN14511 standard. Usage environment, such as operation of the heating equipment, room temperature, and controller adjustments, may cause disparities between practically determined values and these values.
*2:All information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

Dimensions

Outdoor Unit:
WOYA060LFCA/WOYA080LFCA



WOYA100LFTA



Hydraulic Indoor Unit:
WGYA050DG6/WGYA100DG6