AIR TO WATER

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- High Power Series
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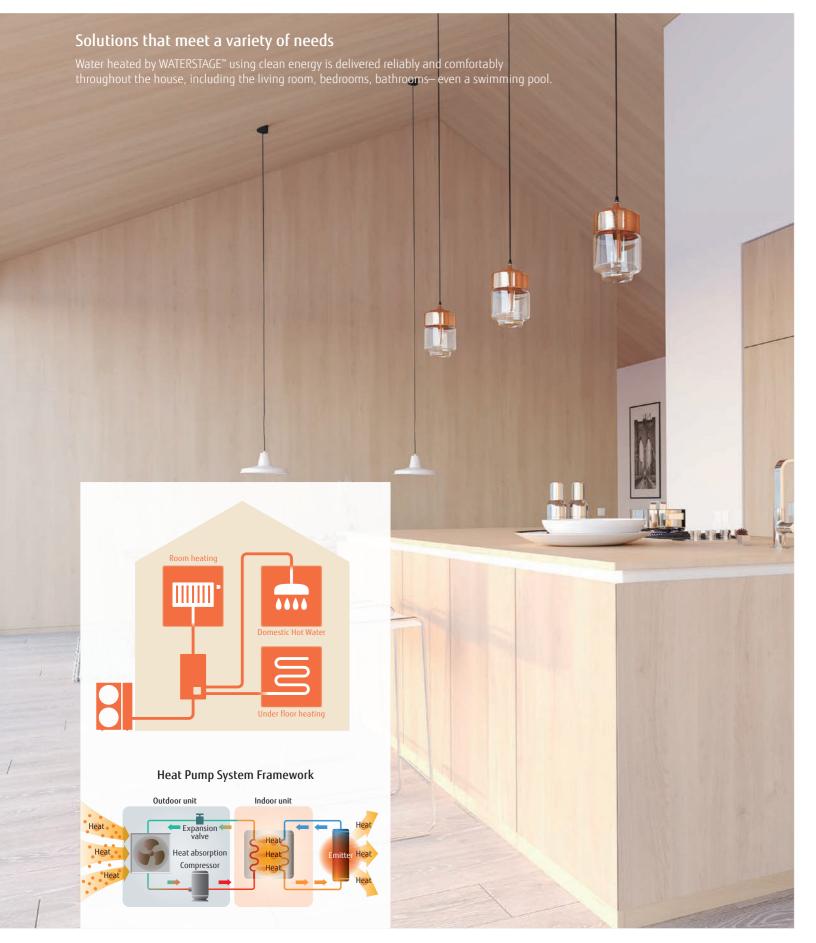




FUJITSU GENERAL LIMITED

WATERSTAGE

WATERSTAGE™ Overview



27 Models

Fujitsu General WATERSTAGE™ heat pumps offer a variety of high-efficiency renewable central heating systems that absorb energy primarily from the air.



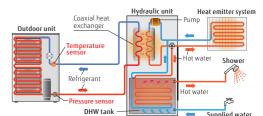
Optimized refrigerant cycle operation

Super High Power and High Power Series deliver high performance and efficiency with twin sensors and hot water heating technology.

Outdoor unit Hydraulic unit Heat emitter system sensor Refrigerant Hot Water

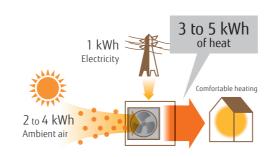
Split Type

Split DHW Integrated Type



What is a heat pump?

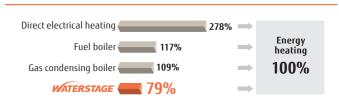
A heat pump extracts heat energy from the atmosphere. It requires only 1 kW of electricity to generate 3 to 5 kW of thermal energy.



Primary energy usage reduced substantially

Proportion of primary energy converted into heating energy is 100%

Primary Energy Consumption*



* The amount of electricity loss varies according to the power plant. Typical energy efficiency of a power plant: 36%

AIR TO WATE

WATERSTAGE™ Lineup





Туре	Super High	Power Series		t Type wer Series	Comfort Series	Cupar Utah	Power Series	Split DHW Integrate	d Type wer Series		Comfort Series
Hydraulic unit	Superingi	Fower series	nigii Fo	werseries	RS2	Superriigii	Fower Series	ingii ro	wer series	R32	Connorcaenes
Outdoor unit					R32					R32	NEW
Capacity range	15/1	6/17 kW	11/14 kW	11/14/16 kW	5/6 kW 8 kW 10 kW	15/1	6/17 kW	11/14 kW	11/14/16 kW	5/6 kW	8 kW 10 kW
System outline	outdoor temperature. • Supplies 55°C hot woutdoor temperature. • Can be used with a systems,	water even when the ure is -22°C. a variety of heating or heating and radiasupply in one syslitional electric dent control ciris possible.*	 outdoor temperature Can be used with a systems, 	a variety of heating or heating and radia-supply in one sys-ditional electric ident control cirus is possible for up is possible.*	 Supplies 55°C hot water even when the outdoor temperature is -22°C. Heating and DHW supply in one system.* Equipped with additional electric heater for backup Up to two independent control circuits.* Cooling operation is possible.* Operating range is -20 to 35°C. Can be used with a variety of heating systems, including underfloor heating and radiators.* 	radiators.* • Space saving heatin single Hydraulic unit	e is -20°C. Seter even when the e is -22°C. variety of heating nderfloor heating and g and DHW supply in a ional electric heater for	radiators.* • Space saving heating single Hydraulic unit	e is -20°C. variety of heating inderfloor heating and g and DHW supply in a ional electric heater for	 outdoor temp Heating and I Equipped with backup Up to two ind Cooling operating rand -20 to 35°C. Can be used with the country of th	thot water even when the perature is -22°C. DHW supply in one system. In additional electric heater for elependent control circuits.* In a spossible.* In a spossible is electric heating and electric heating electric hea
Power source	Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	Single phase, ~230 V, 50 Hz	Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	Single phase, ~230 V, 50 Hz	3-phase, ~400 V, 50 Hz	Sing	le phase, ~230 V, 50 Hz
5 kW					WSYA050ML3 WOYA060KLT						WGYA050ML3 WOYA060KLT
6 kW					WSYA080ML3 WOYA060KLT						WGYA080ML3 WOYA060KLT
8 kW					WSYA080ML3 & WOYA080KLT						WGYA080ML3 WOYA080KLT
ລ 10 kW					WSYA100ML3 WOYA100KLT						WGYA100ML3 WOYA100KLT
pacity 11 kW			WSYG140DG6 WOYG112LHT	WSYK160DG9 WOYK112LCTA				WGYG140DG6 WOYG112LHT	WGYK160DG9 WOYK112LCTA		
14 kW		WSYK170DJ9	WSYG140DG6 WOYG140LCTA	WSYK160DG9 WOYK140LCTA			WGYK170DJ9	WGYG140DG6 WOYG140LCTA	WGYK160DG9 WOYK140LCTA		
15 kW		WOYK150LJL		WSYK160DG9		WGYG160DJ6	WOYK150LJL		WGYK160DG9		
16 kW	WOYG160LJL	WSYK170DJ9		WSYK160DG9 WOYK160LCTA		WOYG160LJL	WGYK170DJ9		WGYK160DG9 WOYK160LCTA		
17 kW		WOYK170LJL					WOYK170LJ				

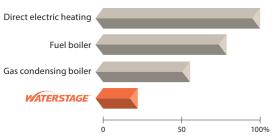
*Ontional parts require

Benefits

ess CO₂ Emissions

WATERSTAGE™ is an environmentally friendly system that emits substantially less carbon dioxide than conventional gas and hydrocarbon combustion systems.

Average annual CO₂ emissions

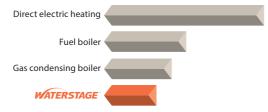


*Calculations based on energy efficiency data provided by the European Programme for Energy Efficiency in EU-27: 89% for fuel boilers; 93% for gas boiler

Running Cost

High-efficiency heat pump technology keeps the running cost of a WATERSTAGE™ system.

Average annual running cost



*The running cost may vary depending on a system's installation geographical location, and operating conditions

Clean and Healthy

As a WATERSTAGE™ system does not use a burner to heat water, it does not produce NOx or other harmful substances.



Easy Installation and Maintenance

All components are built into a compact outdoor unit or a Hydraulic unit.





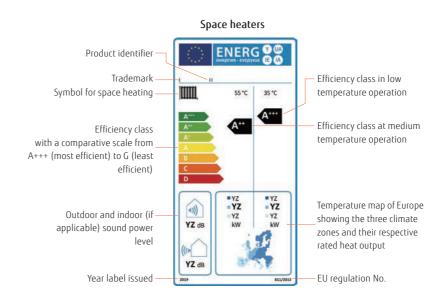


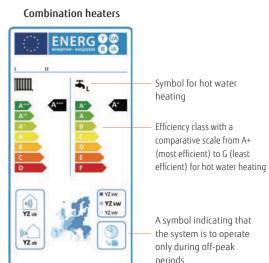
Well-designed Hydraulic unit

The sophisticated arrangement of Hydraulic units makes piping and maintenance work easy.

Energy Efficiency Standards

Product labels





The Ecodesian Directive Lot 1 Regulation 813/2013

The Ecodesign directive defines a regulatory framework for improving the environmental performance of energy-related products (ErP)

Since September 26, 2015, the Ecodesign Directive has applied to space heaters, including heat pumps and fossil fuel fired boilers, combination heaters for space and hot water heating, water heaters, and water storage tanks.

All of these products must meet minimum requirements for energy efficiency*1 and maximum sound power level. The minimum energy efficiency class were raised on September 26, 2017, and the maximum sound levels were lowered on September 26, 2018.

*1: Energy efficiency is expressed in terms of seasonal space heating efficiencies (ns). The value is based upon the Seasonal Coefficient of Performance (SCOP).

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

Energy label is intended to enable consumers to make direct comparisons of energy use and product features. All labels should indicate the product identifier, efficiency class, sound power level, and heat output. Heat generators are rated A+++ to D. There are two different product labels. One for space heaters and one for combination heaters.

Seasonal space heating Energy efficiency class

	Except low temp. HP 55°C	Low temp. HP 35℃
A	ηs ≥ 150	ηs ≥ 175
A"	125 ≤ ηs < 150	150 ≤ ηs < 175
A.	98 ≤ ηs < 125	123 ≤ ηs < 150
	90 ≤ ηs < 98	115 ≤ ηs < 123
В	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



Fuiitsu General's WATERSTAGE™*2 has acquired the EHPA Quality Label*3 through testing in accordance with the International Standards EN14511 and EN17025. The EHPA Quality Label*3 is a label that shows the endconsumer a quality heat pump unit on the market

*2: 3-phase High Power Series only *3: Learn more about the validity of the mark at www.ehpa.org/quality/quality-label

SG ready Label



SG ready is a label issued to heat pumps and their control technologies that meet the requirements set by BWV*4, and technologies that conform to their

standards can be integrated into a smart grid. SG ready labeled heat pumps receive signals from the power grid and PV systems with regard to energy and renewable energy sources such as wind, solar, and water. All of Fujitsu General's new heat pump series are SG ready compatible

*4: BWP: Bundesverband Wārmepumpe e. V (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 has acquired the KEYMARK certificate*6.

- *5: R32 refrigerant comfort model only
- *6: Learn more about the validity of the mark at www heatpumpkeymark.com/about

Home Heating & Domestic Hot Water Supply

A wide range of products to suit regional characteristics, family structures, and usage patterns. We provide a variety of products to meet the needs of customers from the heating-centered High Power Series to the reasonably priced Compact Series.





Floor heating and domestic hot water supply

Outdoor units and hydraulic indoor units can be installed flexibly and easily. Hydraulic units installed inside the house prevent the circulating water from freezing. More units can be cascaded together to provide a greater heating capacity with greater flexibility.11

*1: High Power Series only



Adopting R32 refrigerant

R32 refrigerant is an environmentally friendly refrigerant with a significantly lower Global Warming Potential (GWP) than conventional refrigerants.



A DHW tank (optional) can be connected to supply hot water.

+ Boiler

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

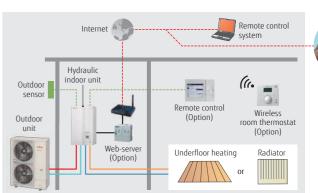
*Optional parts required



WATERSTAGE

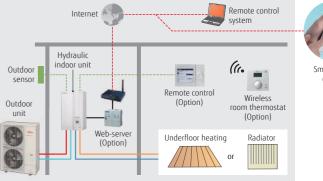
Built-in DHW tank saves a great deal of space.

Existing boilers can be replaced easily. A higher heating capacity can be achieved with the flexibility to cascade more units.



Smart control

To meet the diverse needs of customers, we offer a variety of control options, such as individual control and remote control options.



W-008

High water flow temperature

backup heater, even when the outdoor



High-Efficiency Technology

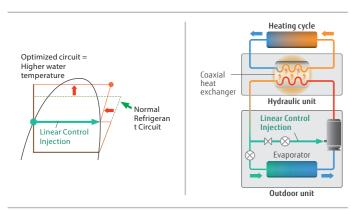
Twin-Rotary Compressor

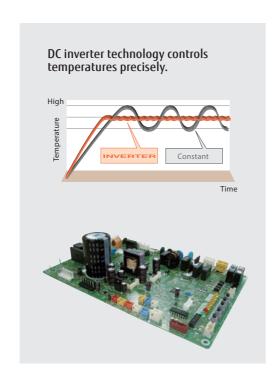


For Outdoor unit

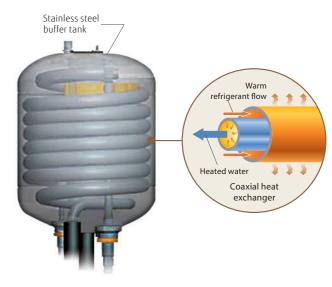
Twin-Rotary Compressor with Linear Control Injection Port

The compressor achieves a high condensing temperature without overheating the discharge gas temperature due to the Linear control injection process used during compression. This makes the condensing temperature higher than in a normal circuit. Higher water temperatures can be achieved by controlling the injection volume according to usage conditions.





High-durability coaxial heat exchanger



For Hydraulic unit

Stainless steel buffer tank

Heat exchange amount is 25% higher than the previous model. Energy-saving performance has also been improved.

- Anti-corrosion protection
- No flow switch required
- Anti-freeze protection not required

Class A Pump

Energy-saving pump with the ability to adjust the flow rate and pressure to a constant level













The temperature of water flow is up to 55°C without a backup heater. Hot water supply temperature can be maintained even at -10°C outdoor temperature.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.





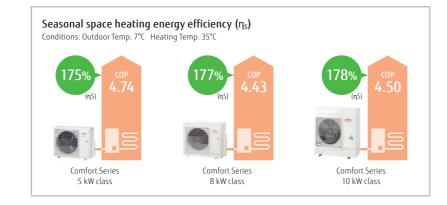
High COP

Heat pumps of WATERSTAGE™ ATW Systems work more efficiently and consume less energy than conventional heating systems.

Energy efficiency class



*Temperature application: Heating temp. 35°C





Hydraulic unit:

WSYA050ML3/WSYA080ML3/

WSYA100ML3

Outdoor unit:

WOYA060KLT/WOYA080KLT/

WOYA100KLT







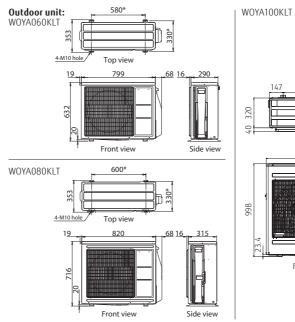
Specifications

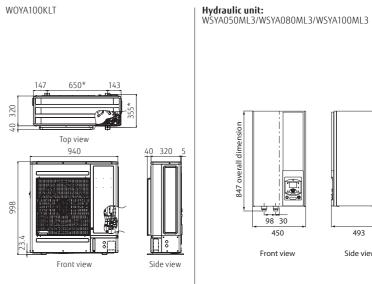
Model Name		Hydraulic unit			50ML3		80ML3	WSYA0		WSYA1		
C'h D		Outdoor unit		WUYA	060KLT		060KLT	WOYAC		WOYA1		
Capacity Range		11			5		6		3		0	
790/2000 (1	- +1	Heating capacity	kW		50 949		50 18	7.:		9.5		
/ C/35 C floor neatil	ng "	Input power										
					74 50		65 30	6.		4.1		
200/2500 (1 1	+1	Heating capacity	kW									
2°C/35°C floor heatii	ng ^·	Input power COP			33 39		65 22	1.9		3.0		
										3.0		
796/2596 (1 1	- a1	Heating capacity	kW		40		00	5.		8.9		
-/ C/35 C floor heati	ng^	Input power			59		90	2.		3.3		
		COP			76	Z.	63	2.	08	2.0	b5	
			0.0		25		25		25		35	
			°C	55	35	55	35	55	35	55		
			1.1147	A++	A+++	A++	A+++	A++	A+++	A++	A+++	
		/ \	kW	5	5	5	6	6	/	8	9	
		(η_s)	%	125	175	125	175	128	177	130	178	
Annual energy cons	umption		kWh	3,035	2,322	3,411	2,594	3,903	2,982	5,083	3,875	
Sound power level*	3 Hydraulic unit		dB(A)	40	-	40	-	40	-	40	-	
	Odtador dint			57	-	57	-	60	-	62	-	
	ifications											
								~230 V, 50 Hz				
	D		mm		50 × 493		50 × 493	847 × 45		847 × 45		
			kg		÷7		₊ 7	4		4	•	
		Min./Max.	L/min		22.0		22.0		22.0	13.2/		
			L		6		6		6	16		
			L		8		8		3		3	
		Max.	°C		i5		i5	5	-		5	
	on diameter	Flow/Return	mm		/Ø25.4		/Ø25.4	Ø25.4		Ø25.4/		
		Capacity	kW	3	.0] 3	.0	3.	0	3.	.0	
	ications											
								~230 V, 50 Hz				
Current		Max.	A		3.0		3.0	18		19		
	D		mm		99 × 290		99 × 290	716 × 82		998 × 94		
Weight (Net)			kg		19		19	4		6		
Pofringrant		Type (Global Warming P			(675)		(675)	R32		R32 (
		Charge	kg		97		97	1.0		1.6		
Additional refrigera	nt charge		g/m		25		25	2		2		
	Diameter	Liquid	mm		35		35	6.		9.5		
		Gas			.70		.70	12.		15.		
nnual energy consumption ound power level** Hydraulic unit Outdoor unit Ydraulic unit specifications Ower source Impair Outdoor unit Impair Outdoor unit specifications Outdoor u		Min./Max.	m		30		30	3/		3/30		
apacity Range C/35°C floor heating *1 Dace heating characteristics*2 Imperature application neergy efficiency class ated heat output (Prated) acasonal space heating energy efficiency class ated heat output (Prated) acasonal space heating energy efficiency class ated heat output (Prated) acasonal space heating energy efficiency class ated heat output (Prated) acasonal space heating energy efficiency control of the property of the property of the property of the property energy efficiency of the property efficiency of the property energy efficiency of the property efficiency efficie	Length (Pre-charge		m	1	15		5		5	20		
	Height difference	Max.	m		20	_	20	2	-	20		
Operating range		Heating	°C	-20	to 35	-20	to 35	-20 t	o 35	-20 t	o 35	

- *1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.
 *2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/
 *3: The sound power level values are based on EN12102 standard measurements under EN14825 standard conditions.

Dimensions

(Unit: mm)





493 450 Side view

*Pitch of bolts for installation









The temperature of water flow can be maintained at 60°C without using a backup heater, even when the outdoor temperature drops to -20°C. The system can supply 55°C water without a backup heater at an outdoor temperature of -22°C.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.

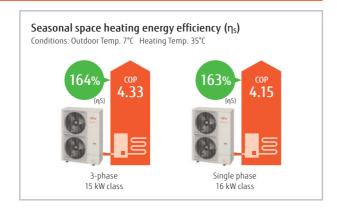


High COP

Heat pumps of WATERSTAGE™ ATW Systems work more efficiently and consume less energy than conventional heating systems.

> Energy efficiency class





Operating range extended to -25°C

Operating range improved down to -25°C outdoor temperature



Hydraulic unit: WSYG160DJ6/[3-phase] WSYK170DJ9 Outdoor unit: WOYG160LJL

[3-phase] WOYK150LJL/WOYK170LJL



Single phase/



Single phase 16 kW 3-phase 15/17 kW

Specifications

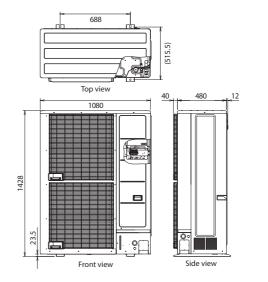
Model Name		Hydraulic unit		WSYG1			170DJ9		170DJ9			
Model Natile		Outdoor unit		WOYG			150LJL		(170LJL			
Capacity range												
		Heating capacity	kW		.00		.00		7.00			
7°C/35°C floor heati	ng *¹	Input power	T KVV	3.	86	3.	46	4	.10			
		COP		4.	15	4.	.33	4	.15			
		Heating capacity	kW	13.	.30	13	.20	13.50				
2°C/35°C floor heating	na *1		KW	4.	25	4.	.06	4	.27			
	,	COP		3.			.25	3	.16			
		Heating capacity		14.	.50	13	.20	15	5.00			
-7°C/35°C floor heat	inn*1		kW	5	27		.55		.32			
	9	COP		2.			.90		.82			
Space heating char	et Name ocity range 35°C floor heating *1 If 36°C floor heating *1 If				, ,		.50		.02			
	City range S*C floor heating *1 Input power COP Heating cap Input power COP Heating cap Input power COP Be heating characteristics*2 erature application gly efficiency class Input power COP Be heating capital input power COP Be heating capita		°C	55	35	55	35	55	35			
Energy efficiency cla	ass		' '	A++	A++	A++	A++	A++	A++			
Rated heat output (C floor heating *1 Heating capac C floor heating *1 Heating capac Input power COP Heating capac Input power COP Heating capac Input power COP Heating capac Input power COP Heating capac Input power COP Heating capac Input power COP Heating capac Input power COP Meating characteristics* ature application efficiency class Heat output (P _{raned}) al space heating energy efficiency (n _S) energy consumption Dower level Hydraulic unit Outdoor unit Ilic unit specifications Flow (Net) Inculation In Min./Max. Min./Max. Max. Max. Source Max. Source In Max. Max. In Type (Global Wa Charge Type (Global Wa Charge Type (Global Wa Charge Type (Height Min./Max. Length Length Length Min./Max. Length Min./Max. Length Min./Max. Max. Min./Max. Min		kW	14	16	16	17	17	18			
	Varinge C floor heating *1 PC floor heating *1 D floor heating caparing floor heating caparing floor heating caparing floor heating floor heating floor unit fl	ncv (n _c)	%	125	163	130	164	130	161			
	Name Outdoor unit ity range "C floor heating *1	(*15/	kWh	8,757	8,014	9,915	8,606	10,232	9,059			
				45	45	45	45	45	45			
Sound power level			dB(A)	67	66	67	66	67	68			
Hydraulic unit spec				07			00	- 07				
Power source	medelons		T	Single phase	~230 V, 50 Hz		3-phase, ~4	00 V 50 Hz				
	D		mm	805 × 45			805 × 45					
	U		kg	52			52					
		Min /May	L/min	26.4		2/, 0	/54.2		3/61.4			
	,	WIII./WIGA.	1		2	24.0	2		701.4			
					0		11					
		May	°C	6			6					
			mm	Ø25.4			Ø25.4/					
	ion diameter		kW	6.0 (3.0 k)			9.0 (3.0 kV					
	ications	Гараситу	KVV	0.0 (3.0 K)	N ^ 2 μcs.)		3.0 (3.0 KV	v ^ 3 pcs.)				
	ICACIONS			Single phace	~230 V, 50 Hz	T	3-phase, ~4	00 V E0 H-				
		May	T A		3.0	1,	3-priase, ~4 4.0		4.0			
	Tyrange Heating capacit Input power COP Heating capacit Input power	IVIDĂ.			080 × 480		.080 × 480		,080 × 480			
			mm kg	1,420 × 1,			38		,080 × 480 38			
weight (Net)		Tupo (Clobal Warmina)		- 1;	0/		(2,088)	I	30			
Refrigerant				2.0	80			2	00			
Additional refrigers		Charge	kg /m	5.1			80		.80 50			
Auditional lenigera	T charge	Liquid	g/m				9.52		9.52			
	Diameter		mm -	 Ø15			5.88		5.88			
Connection nice	Longth		- m	5/			/30		5.88 /30			
connection pipe	C/35°C floor heating *1 C/35°C floor heating		m	5/.								
		o May	m	I	J	15 15 15						
Opposition cons.			m °C	-25 t	ιο 2Γ	25/15 (Outdoor unit: Upper/Lower) -25 to 35 -25 to 35						
operating range	Input power COP Heating cap Input power COP Heating cap Input power COP Heating cap Input power COP Input power COP Heating cap Input power COP Input power Input power COP Input power Inp		[-25 t	.0 33	-25	10 33	-25 to 35				

*1: Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual

Dimensions

(Unit: mm)

Outdoor unit:Single phase: WOYG160LJL
3-phase: WOYK150LJL/WOYK170LJL



Hydraulic unit:Single phase: WSYG160DJ6
3-phase: WSYK170DJ9 471 Heating flow Ø25.4 Heating return Ø25.4 Front view

^{*2:} Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/







The temperature of water flow can be maintained at 60°C without using a backup heater, even when the outdoor temperature drops to -20°C.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.



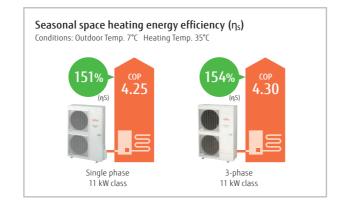
High COP

Heat pumps of WATERSTAGE™ ATW Systems work more efficiently and consume less energy than conventional heating systems.

> Energy efficiency class



*Temperature application: Heating temp. 35°C





Hydraulic unit:

WSYG140DG6/[3-phase] WSYK160DG9

Outdoor unit:

WOYG112LHT/WOYG140LCTA [3-phase] WOYK112LCTA/WOYK140LCTA/ WOYK160LCTA





Outdoor unit Single phase

Outdoor unit 3-phase 11/14/16 kW

Specifications

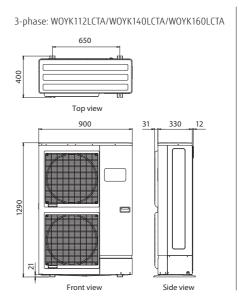
Model Name		Hydraulic unit		WSYG1	40DG6	WSYG1	40DG6	WSYK1	60DG9	WSYK1	160DG9	WSYK1	60DG9		
model Name		Outdoor unit		WOYG1	112LHT	WOYG1	40LCTA	WOYK1	12LCTA	WOYK1	40LCTA	WOYK1	60LCTA		
Capacity range	y range C floor heating *1 C floor heating *1 In CC In C floor heating *1			1	1	1	4	1	1	1	14	1	6		
	city range 15°C floor heating *1 25°C floor	Heating capacity	kW	10.	.80	13	.50	10	.80	13	.50	15	.17		
7°C/35°C floor heati	ng *1	Input power	KVV	2.	54	3.	23	2.	51	3.	.20	3.	70		
		COP		4.	25	4.	.18	4.	30	4.	.22	4.	10		
		Heating capacity	1.147	10.	.77	12	.00	10	.77	13	.00	13	.50		
2°C/35°C floor heati	na *1		kW	3.4	44	3.	87	3.	40	4.	.15	4.	34		
	,	COP		3.			.10		17		.13	3.			
		Heating capacity		10.	.38	11	.54	10	.38	12	.20	13	.50		
-7°C/35°C floor heat	ina*¹		kW	4.	32	5.	08	4.	28	5.	.13	5.	40		
	,	COP		2.			27		43		.38		50		
Space heating char	acteristics*2	'													
			°C	55	35	55	35	55	35	55	35	55	35		
Energy efficiency cla				A+	A++	A+	A+	A+	A++	A+	A++	A+	A+		
	Trange Heating capa Input power COP Hydraulic unit Outdoor unit COP Input power COP Input po			9	11	11	13	9	11	11	13	13	14		
	floor heating *1 Heating capar Input power COP Input power Input p			112	151	113	148	112	154	117	150	117	149		
		1 137	kWh	6,704	6,062	8.041	6,824	6,669	5,930	7,803	6,738	9,062	7,408		
	Section pipe Capacity		ID/A)		6	4	6	46			6		6		
Sound power level	The street of th		dB(A)	6	8	6	59	69	68	70	68	7	1		
Hydraulic unit spec	Heating capaci Input power COP Input power COP Input power Input p										<u>'</u>				
Power source				Sii	ngle phase,	~230 V, 50	Hz			3-phase, ~4	400 V, 50 Hz	7			
Dimensions H × W >	D		mm			50 × 457				800 × 4	50 × 457				
Weight (Net)			kg		4	2				4	+2				
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	Jase C floor heating *1		L		1	6				1	16				
Expansion vessel ca	apacity		L			8					8				
Water flow tempera	ture range	Max.	°C		6	0				6	50				
Water pipe connect	ulic unit specifications source sisions H × W × D t (Net) circulation Min./Max. tank capacity sion vessel capacity flow temperature range Max. pipe connection diameter Flow/Retur				Ø25.4	/Ø25.4		Ø25.4/Ø25.4							
Backup heater		Capacity	kW		6.0 (3.0 k	W × 2 pcs.)				9.0 (3.0 k)	W × 3 pcs.)				
Outdoor unit specil	fications														
Power source	l energy consumption			Sii	ngle phase,	~230 V, 50	Hz			3-phase, ~4	400 V, 50 Hz	7			
Current		Max.	Α	22			5.0	9	.0	9	.5	10).5		
Dimensions H × W ×	D		mm					1,290 × 9	900 × 330			•			
Weight (Net)			kg		Ç	12				9	99				
D. (: .	y efficiency class theat output (P _{rated}) theat outpu							R410A	(2,088)						
Refrigerant								2.50							
Additional refrigera	nt charge		kg g/m					5	0						
	1	Liquid						Ø9	.52						
	nameter		mm					Ø15	5.88						
Connection pipe	Length	Min./Max.	m												
	Length (Pre-charge)	m						5						
	Height difference	Max.	m					1	5						
Operating range	-	Heating	°C					-25	to 35						

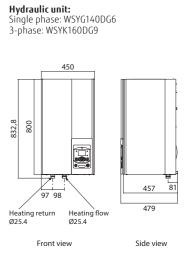
^{*1:} Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

Dimensions

(Unit: mm)

Outdoor unit: Single phase: WOYG112LHT/WOYG140LCTA Top view 900





^{*2:} Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

Split DHW Integrated Type







High water flow temperature

The temperature of water flow is up to 55°C without a backup heater. Hot water supply temperature can be maintained even at -10°C outdoor temperature.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.







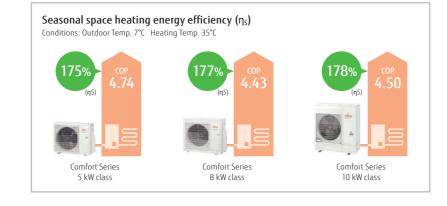
High COP

Heat pumps of WATERSTAGE™ ATW Systems work more efficiently and consume less energy than conventional heating systems.

Energy efficiency class



*Temperature application: Heating temp. 35°C





Hydraulic unit:

WGYA050ML3/WGYA080ML3/

WGYA100ML3

Outdoor unit:

WOYA060KLT/WOYA080KLT/

WOYA100KLT











Specifications

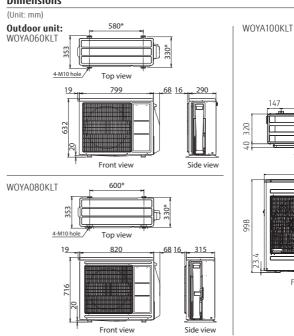
		Hydraulic unit			050ML3 060KLT		080ML3 060KLT		80ML3		100ML3	
		Outdoor unit						WOYA			100KLT	
Capacity range		Lucia de la	Ţ .		5		6		3		10	
705/2505/1	. 41	Heating capacity	- kw -		.50		50		50		.50	
/°C/35°C floor heat	ing * ·	Input power			949		18		69		.11	
					.74		65		43		.50	
		Heating capacity	- kW -		.50		30		30		.30	
2°C/35°C floor heat	ing *'	Input power	KVV		.33		65		96		.08	
					.39		22		21		.02	
		Heating capacity	kW		40		00		70	8.90		
-7°C/35°C floor heal	ting* ¹	Input power	I KW	1.	59	1.	90	2.	13	3.	.36	
		COP		2	.76	2.	63	2.	68	2.	.65	
Temperature applic			°C	55	35	55	35	55	35	55	35	
Energy efficiency cl				A++	A+++	A++	A+++	A++	A+++	A++	A+++	
Rated heat output	(P _{rated})		kW	5	5	5	6	6	7	8	9	
Seasonal space hea	ating energy efficiency	(η _s)	%	125	175	125	175	128	177	130	178	
Annual energy con:	sumption		kWh	3,035	2,322	3,411	2,594	3,903	2,982	5,083	3,875	
Cound named 13	*3 Hydraulic unit		dB(A)	40	-	40	-	40	-	40	-	
200110 bowet teket.	Outdoor unit		J ar(v)	57	-	57	-	60	-	62	-	
Domestic hot water	er characteristics*2				'	•			•			
Load profile					L		L		L		L	
Energy efficiency cl	lass			į.	\+	A	\+	А	+	J.	+	
Energy efficiency (r	nwh)		%	1	30	1	30	13	30	1	30	
			kWh		93		93		93		93	
Hydraulic unit spe	cifications					<u> </u>						
Power source							Single phase,	~230 V, 50 Hz				
Dimensions H × W	× D		mm	1.863 × I	548 × 700	1.863 × 6	48 × 700	1.863 × 6	48 × 700	1.863 × 6	548 × 700	
Weight (Net)			kg		45		45		45		45	
Water circulation		Min./Max.	L/min		22.0		22.0	10.0	/22.0	13.2	/30.0	
DHW capacity		1			90		90		90		90	
	anacity		kW		.5		.5		.5		.5	
Buffer tank capacit			1		16		6		6		16	
			Ĺ		8		8		3		8	
		Max	1 %		55		55		5		55	
		Flow/Return	mm		/Ø25.4		/Ø25.4		/Ø25.4		/Ø25.4	
			mm		9.05		9.05		9.05		9.05	
Backup heater	ccc.on didinetel	Canacity	kW		.0		.0		.0		.0	
	ifications	copacity	IX T		.0							
Power source							Single phase,	~230 V. 50 Hz				
Current		Max.	I A	1	3.0	13	3.0		3.0	10	9.0	
Dimensions H × W	× D	1	mm		99 × 290		99 × 290	716 × 82			40 × 320	
Weight (Net)			ka		39		19		2		52	
		Type (Global Warming P			(675)		(675)	R32			(675)	
Refrigerant			kg		.97		97		02		.63	
Additional refrinera	ant charge	1 cyc	g/m		25		25		5		20	
	T	Liquid			.35		35		35		.52	
	Diameter		mm		.70		.70		.70	15.88		
Connection pipe	Length		m		30		30		30		30	
comiccion pipe			m		15		5		5		20	
			m		20		20		0	20		
Operating range	neight unleighte				to 35		to 35		:0 35	-20 to 35		
	floor heating *1 Heating Input pc COP Heating floor heating *1 Input pc COP Heating floor heating *1 Input pc COP Heating Input pc COP		°C						ננ ט.	-20	רכ חי	

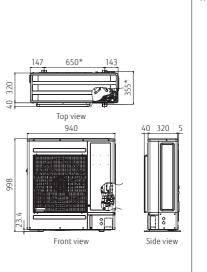
- equipment, room temperature, and corrace ineasured using the EN14311 staffuard. Actual usage enrollments, such as the operating modes of the neating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.

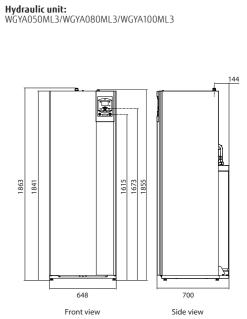
 *2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

 *3: The sound power level values are based on EN12102 standard measurements under EN14825 standard conditions.

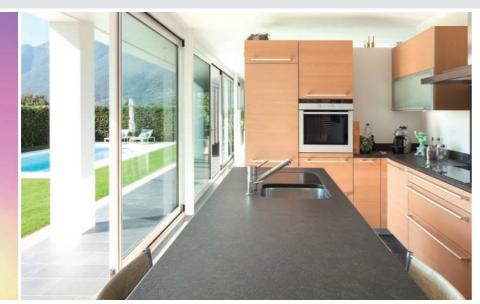
Dimensions







*Pitch of bolts for installation





The temperature of water flow can be maintained at 60°C without using a backup heater, even when the outdoor temperature drops to -20°C. The system can supply 55°C water without a backup heater at an outdoor temperature of -22°C.

* If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.

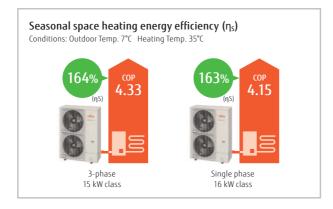


High COP

Heat pumps of WATERSTAGE™ ATW Systems work more efficiently and consume less energy than conventional heating systems.

> Energy efficiency class





Operating range extended to -25°C

Operating range improved down to -25°C outdoor temperature



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



Hydraulic unit Single phase/



Single phase 16 kW 3-phase 15/17 kW

Specifications

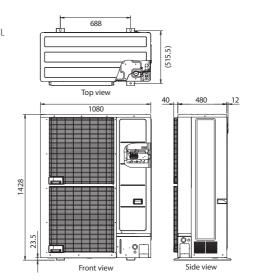
Model Name					160DJ6	WGYK170DJ9 WGYK170DJ							
Woder Name		Outdoor unit		WOYG	160LJL	WOYK	150LJL	WOYK170LJL					
Capacity range				1	6			1					
		Heating capacity	Law	16	.00	15.	.00	17.	00				
7°C/35°C floor heati	ing *1	Input power	kW	3.	86	3.4	46	4.	10				
		COP		4.	15	4.	33	4.	15				
		Heating capacity	1.14/	13	.30	13.	.20	13.	50				
2°C/35°C floor heati	ing *1		kW	4.	25	4.0	06	4.	27				
	,	COP		3.	13	3	25	3.	16				
		Heating capacity	1.14/	14	.50	13.	.20	15.00					
-7°C/35°C floor heat	ing*1		kW	5.	27	4.	55	5.3	32				
	,	COP		2.	75	2.9	90	2.5	32				
Space heating cha	racteristics*2	'		'									
			°C	55	35	55	35	55	35				
Energy efficiency cl			_	A++	A++	A++	A++	A++	A++				
			kW	14	16	16	17	17	18				
		/ (n _c)	%	125	163	130	164	130	161				
		1 13/	kWh	8,757	8,014	9,915	8,606	10,232	9,059				
				45	45	45	45	45	45				
Sound power level	Outdoor unit		dB(A)	67	66	67	66	67	68				
Domestic hot water	ity range "C floor heating *1 Heating capace Input power COP "C floor heating *1 Heating capace Input power COP "C floor heating *1 Input power COP Beating characteristics*2 Frature application yelficiency (lass heat output (Prates) nal space heating energy efficiency (lass heat output (Prates) nal space heating energy efficiency (lass heat output (Prates) nal space heating energy efficiency (lass heat output (Prates) nal space heating energy efficiency (lass heat output (Prates) nal space heating energy efficiency (lass heat output (Prates) nal space heating energy efficiency (lass heat output (Prates) nal space heating energy efficiency (lass heat output (lass heat heat output (lass heat heat output (lass heat heat heat heat output (lass heat heat heat heat heat heat heat heat			Ü.		Ü,		Ü,					
Load profile	characteristics												
	ass					,	4						
			%			10							
			kWh			9/							
			I KIIII			<u> </u>	*1						
Power source	cincacions			Single phase,	~230 V 50 Hz		3-nhasa ~/	400 V, 50 Hz					
	x D		mm	Single phase,	230 V, 30 112	1,841 × 6		100 V, 30 HZ					
Weight (Net)	·· U		kg			1,041 0							
Water circulation		Min /May	L/min	26.4	/57.8	24.0/		27.3	61.4				
DHW capacity		WIIII./WIGA.	L	20.4	137.0	19		21.51	01.4				
	anacity		kW			1.							
			L			2							
			Ĺ			1							
	e heating characteristics*2 erature application y efficiency class Inheat output (P _{rated}) and space heating energy efficiency (η _S) al energy consumption Ind power level Industry efficiency class y efficiency class y efficiency class y efficiency (η _S) al electricity consumption all electricity consumptio		°C			6							
			mm			Ø25.4/							
		I IOW/INCLUIII	mm			Ø23.47 Ø19							
Backup heater	nection diameter	Canacity	kW	6.0 (3.0 k)	N x 2 ncs l	013		W × 3 pcs.)					
	energy consumption power level		LVVV	0.0 (3.0 K)	n τ hrs.)		3.0 (3.0 K	11 2 hrs.)					
Power source	"C floor heating *1			Single phace	~230 V, 50 Hz		3-nhaco ~/	400 V, 50 Hz					
Current		Max	I A		~230 V, 30 FIZ			4.0 v, 30 HZ					
	COP Heating cap. Input power (COP attrice application efficiency class leat output (P _{ated}) al space heating energy efficiency (η _s) energy consumption Hydraulic unit Outdoor unit tic hot water characteristics* ofile efficiency (η _w h) electricity consumption lic unit specifications source close H × W × D (Net) irrulation practity ter heater capacity ank capacity low temperature range list on service of the consumption lic unit specifications source ions H × W × D (Net) irrulation practity ter heater capacity low temperature range list on service of the consumption list on versel capacity low temperature range list on service of the consumption list on versel capacity low temperature range list on versel capacity list of versel capacity list on versel capacity list of versel capa		mm		080 × 480			080 × 480					
Weight (Net)	U		kg		37			38					
	heat output (Prand) all space heating energy efficiency (n _S) Lenergy consumption By draulic unit Outdoor unit citic hot water characteristics* refficiency class refficiency class refficiency (nyh) Lelectricity consumption ulic unit specifications source sions H × W × D (Net) circulation Min./Max. apacity ter heater capacity tlank capacity flow temperature range Max. pipe connection diameter Flow/Return ter pipe connection diameter or unit specifications source ter pipe connection diameter or unit specifications source ter pipe conficiency flow temperature range Max. pipe confiction diameter or unit specifications source ter pipe confiction diameter or unit specifications source ter pipe confiction diameter or unit specifications source ter pipe confiction diameter brand from the wide flow flow flow flow flow flow flow flow	Type (Global Warming P		R410A				(2,088)					
Refrigerant	Input points COP		kg		80			80					
Additional refrigers	ant charge	Charge	g/m		0			0					
, additional remiger		Liquid	9/111		.52								
	Diameter		mm		5.88	Ø9.52 Ø15.88							
Connection pine	Length		m		30			30					
connection pipe			m		5								
				25/15 (Outdoor u		15 25/15 (Outdoor unit: Upper/Lower)							
Opposable a sag	I meigin dinerence		m °C		nit: Upper/Lower)			to 35					
operating range		neating	1 (-25 [.0 33		-25	10 33					

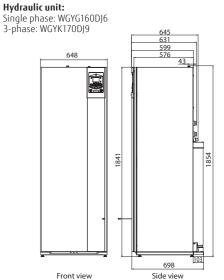
^{*1:} Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual

performance characteristics.
*?: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/ **Dimensions**

Outdoor unit:

Single phase: WOYG160LJL 3-phase: WOYK150LJL/WOYK170LJL





Split DHW Integrated Type





High water flow temperature

The temperature of water flow can be maintained at 60°C without using a backup heater, even when the outdoor temperature drops to -20°C.



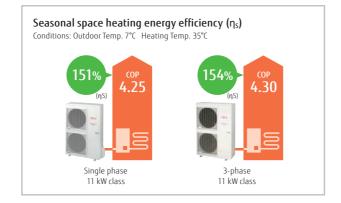
High COP

Heat pumps of WATERSTAGE™ ATW Systems work more efficiently and consume less energy than conventional heating systems.

> Energy efficiency class

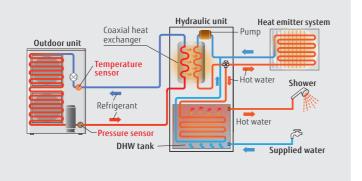


*Temperature application: Heating temp. 35° C



Optimized refrigerant cycle operation

The High Power Series deliver high performance and efficiency with twin sensors and hot water heating technology.



Hydraulic unit:

WGYG140DG6/[3-phase] WGYK160DG9 Outdoor unit:

WOYG112LHT/WOYG140LCTA [3-phase] WOYK112LCTA/WOYK140LCTA/ WOYK160LCTA



Hvdraulic unit Single phase/



Outdoor unit Single phase



Outdoor unit 3-phase 11/14/16 kW

Specifications

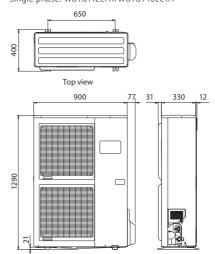
Model Name		Hydraulic unit		WGYG1	40DG6	WGYG1	40DG6	WGYK1	60DG9	WGYK1	60DG9	WGYK1	160DG9				
Model Name		Outdoor unit		WOYG1	12LHT	WOYG1	40LCTA	WOYK1	12LCTA	WOYK1	40LCTA	WOYK1	60LCTA				
Capacity range				1							4						
	C floor heating *1 D heating capa input power cop input power lead output (P _{paten}) input power cop input power lead output (P _{paten}) input power lead output power leading and the lead output power le			10.	80	13	.50	10.	.80	13.	.50	15	.17				
7°C/35°C floor heating	C floor heating *1 Heating capa Input power COP Heating capa Input power Input		kW	2.	54	3.	23	2.	51	3.	20	3.	.70				
	-	COP		4.	25	4.	18	4.	30	4.	22	4.	.10				
		Heating capacity		10.	77	12	.00	10	.77	13.	.00	13.50					
2°C/35°C floor heating	a *1		kW	3.4	44	3.	87	3.	40	4.		4.34					
	,			3.			10	3.	17	3.	13	3.	.11				
	All the string capacity of the string capacity consumption is unit specifications ource on SH × W × D (Net) (Net			10.			.54	10.38			.20		.50				
-7°C/35°C floor heating	na*1		kW	4.			08		28	5.			40				
	. 9			2.			27		43		38		50				
Space heating chara	cteristics*2	1								1							
			°C	55	35	55	35	55	35	55	35	55	35				
Energy efficiency class				A+	A++	A+	A+	A+	A++	A+	A++	A+	A+				
			kW	9	11	11	13	9	11	11	13	13	14				
		(n _c)	%	112	151	113	148	112	154	117	150	117	149				
	C floor heating *1		kWh	6,704	6,062	8,041	6,824	6,669	5,930	7,803	6,738	9,062	7,408				
							6		6		6		6				
Sound power level			dB(A)	46 46 46 46 46 68 69 69 68 70 68 71													
Domestic hot water																	
Load profile				L													
Energy efficiency class	SS								Ą								
Energy efficiency(η_{wh}			%						18								
			kWh						66								
Power source				Sir	ngle phase.	~230 V, 50	Н			3-phase. ~4	00 V, 50 Hz						
Dimensions H × W ×	D		mm	-	-9 p			1.840 × 6	48 × 698	- p.1.000)							
Weight (Net)	-		kg						52								
Water circulation		Min./Max.	L/min	19.5/	39.0	24.4	/28.7	19.5	/39.0	24.4	/48.7	27.4	/54.8				
DHW capacity			1						90								
	acity		kW						.5								
Buffer tank capacity			L					1	6								
	pacity		Ī						2								
		Max.	°C						0								
			mm					Ø25.4	-								
			mm						9.05								
Backup heater		Capacity	kW		6.0 (3.0 k)	N × 2 pcs.)				9.0 (3.0 kV	N × 3 pcs.1						
Outdoor unit specifi	cations	r/			, , , , , , , , , , , , , , , , , , , ,	F/				/= //	- /						
Power source				Sii	ngle phase.	~230 V, 50	Hz			3-phase, ~4	00 V, 50 Hz						
Current		Max.	А	22			5.0	9	.0	9			0.5				
Dimensions H × W ×	D		mm						900 × 330								
Weight (Net)	I energy consumption				q	2		.,		9	9						
	heat output (P _{rated}) hal space heating energy efficiency (η _s) l energy consumption power level Hydraulic unit Outdoor unit Stic hot water characteristics*2 refficiency class refficiency class refficiency (η _{se}) l electricity consumption utilic unit specifications source							R410A	(2.088)								
Refrigerant			kg						50								
Additional refrigeran	t charge		g/m						0								
- 3		Liquid							.52								
	Heati Input COP		mm						5.88								
Connection pipe	Lenath		m														
	Cop Heating capal Input power COP Heating capal Input power COP Heating capal Input power COP Heating characteristics* Cop Heating characteristics* Cop Heating characteristics* Cop Heating characteristics Input power Cop Hydraulic unit Outdoor unit Input power Cop Hydraulic unit Outdoor unit Input power Input powe								5								
	Heating capace								5								
Operating range	, ,		m °C	°C -25 to 35													

^{*1:} Heating capacity, input power, and COP are measured using the EN14511 standard. Actual usage environments, such as the operating modes of the heating equipment, room temperature, and controller settings, may cause differences in values between those listed in the catalog and the actual performance characteristics.
*2: Information about ErP can be downloaded from our website at www.fujitsu-general.com/global/support/downloads/search/

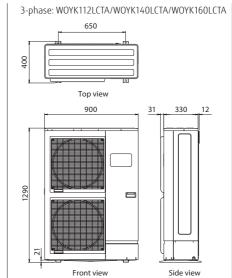
Dimensions

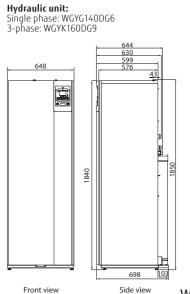
(Unit: mm)

Outdoor unit: Single phase: WOYG112LHT/WOYG140LCTA



Front view

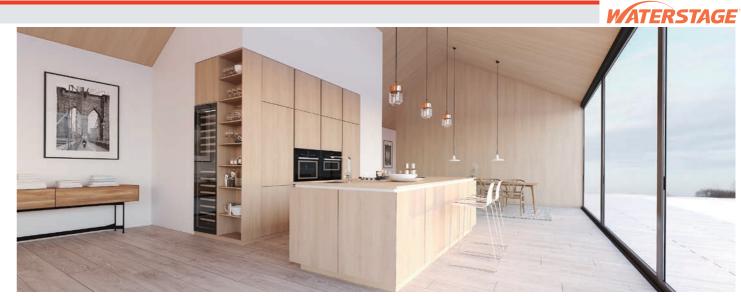


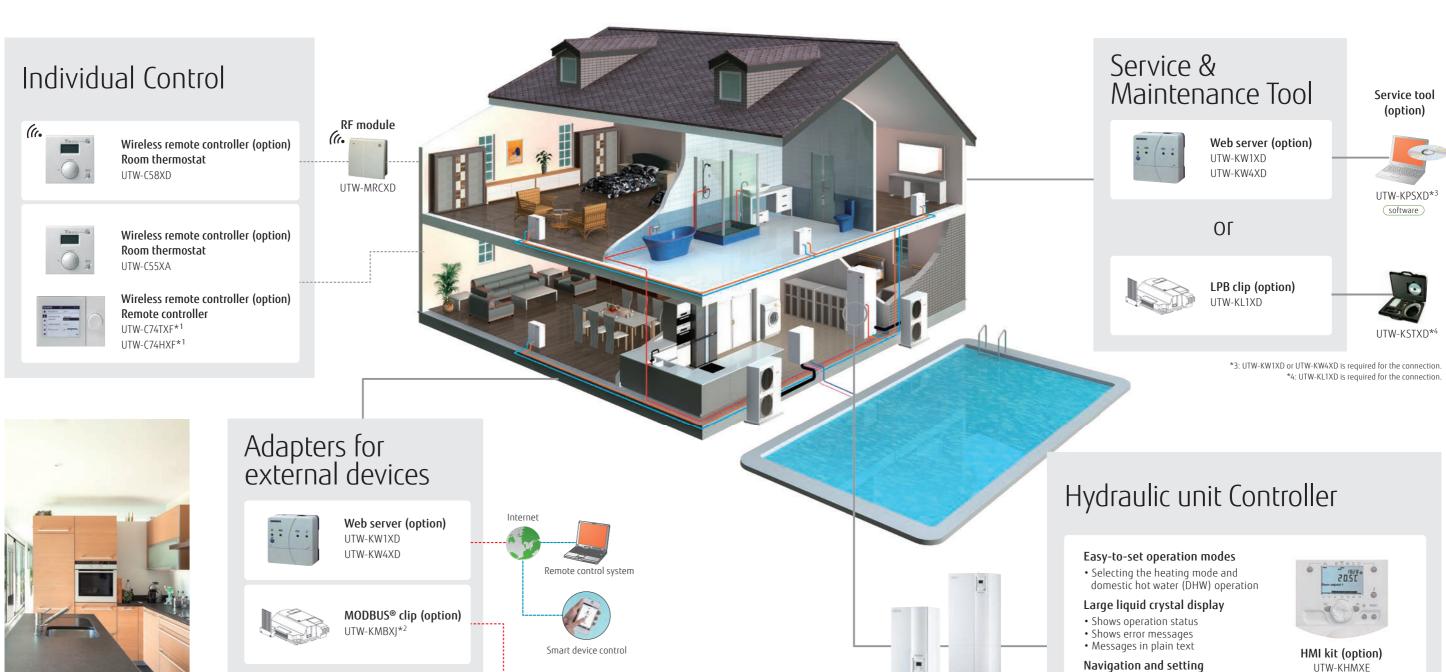


^{*} If you want to raise the temperature of the water supply to above the maximum temperature, use a backup heater to supplement the primary heater.

Control Overview

To meet the diverse needs of customers, we offer a variety of control options, such as individual control and remote control options.





*2: Additional optional parts required.

Home automation system

W-024

UTW-KHMXE

Supports

multiple languages

• Select from heating menu

Setting Time program

Super High Power Series Hydraulic unit



Comfort Control

The high-grade heating controller automatically adjusts the flow temperature according to the climate conditions to maintain the room and domestic hot water temperatures at the desired levels.

Hydraulic unit Controller

4 Heating modes

1. Automatic mode

Enables automatic switching between Comfort mode and Reduce mode according to time program

2. Reduce mode

Maintains water temperature at a lower level

3. Comfort mode

Maintains water temperature at a comfortable level

4. Protection mode

Activates frost protection in standby operation

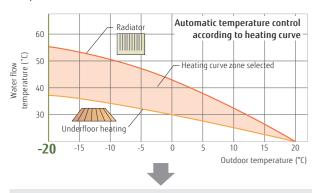


FUITSU

Useful Features

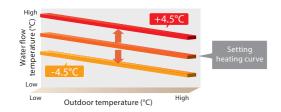
Automatic heating curve control

Automatic temperature regulation according to heating curve (depending on heating terminal and outdoor temperature)



The heating curve will shift to adjust the room temperature setting.

Can be fine-adjusted when it is too warm or too cold.



Quick recovery from defrosting

Maintains room temperature by boost start operation during defrosting.

Auto changeover

When cooling mode is selected, the system automatically switches between cooling and heating modes depending on the outdoor temperature to serve as an all-season air conditioner.

2-zone independent control 2-zone independent control (For example, the individual 2nd Circuit Kit control of 2 underfloor heating zones or the combination of 1 underfloor heating zone and 1 radiator zone)*1 underfloor heating

2-stage low-noise mode

The outdoor unit can be switched to quiet mode, depending on the installation environment.

*1: Optional parts required



Backup heater operation

Backup heater maintains a comfortable room temperature even when the outside temperature is low. The backup heater is intelligently controlled as a safety backup for very cold days and nights, and only operates when really needed.

Energy Saving

Time program

- The timer is easy to set.
- You can select the heating mode in conjunction with various times of the day.

Day-weekly timer

- Allows up to 3 settings per day.
- Allows individual settings for each day of the week.

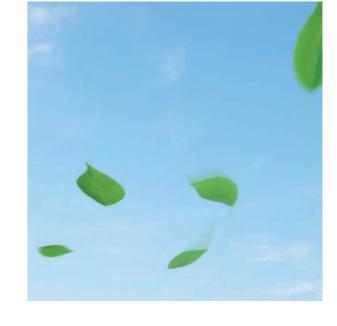
Holiday timer

- Allows up to 8 settings.
- While you are away from home for an extended period during winter, the system prevents your room or house from freezing.

Peak cut Function*2

Sets the peak current value to reduce power consumption.

Mode	Ratio to reduce power consumption
1	100%
2	75%
3	50%
4	Almost 0%



Safety Features

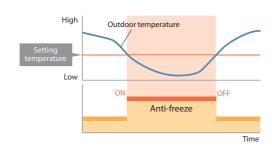
Anti-Legionella function

Prevents the growth of Legionella bacteria in the DHW tank to supply safe and clean hot water at all times.



Anti-freeze function

When the outside temperature drops below a specified level, the compressor will self-activate and water will also be automatically circulated to prevent freezing.

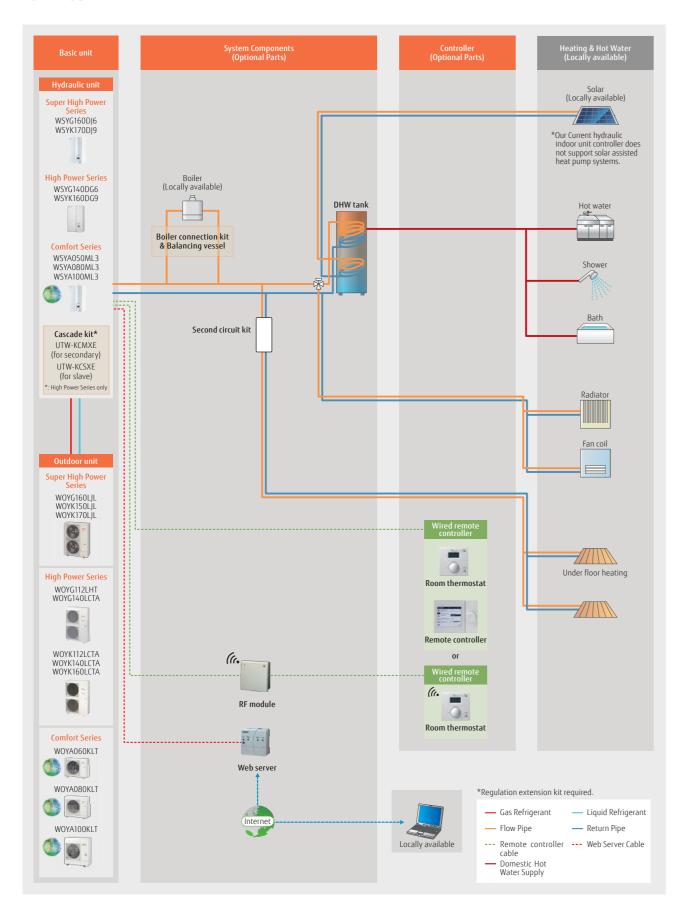


Emergency operation If an outdoor unit fails to operate, a built-in backup heater or an external boiler is activated to supply an uninterrupted supply of hot water to the house. Hydraulic unit *When additional boiler connected **Error and Maintenance Alarm** Enables quick error-handling services and maintenance \$ 40° 0 0 0 18:28 Error Maintenance 20.50 • Error history saves 10 errors in memory Display telephone number of service company

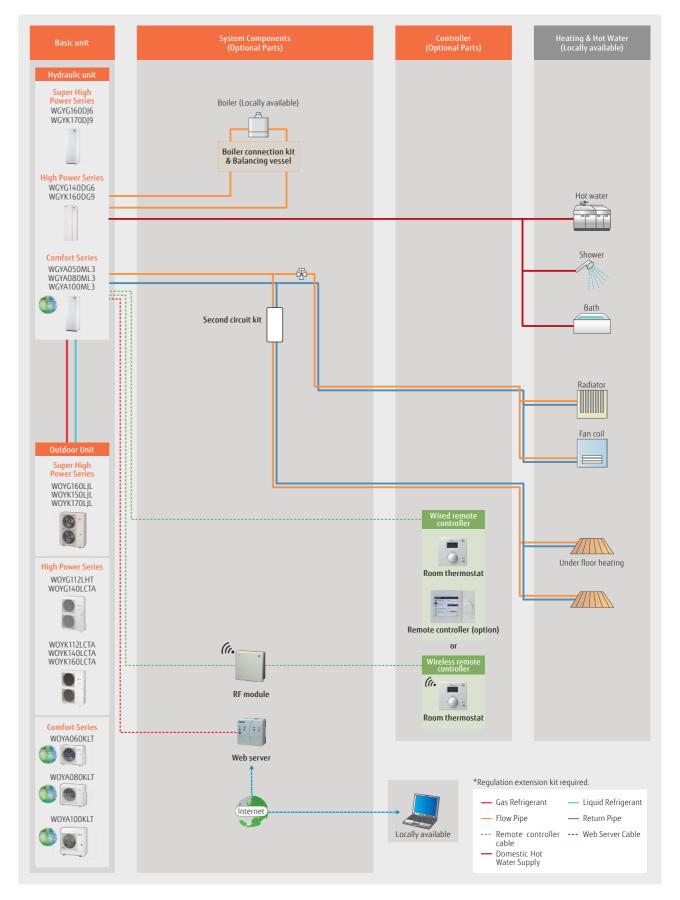
^{*2:} Optional parts required

System Configuration

Split Type



Split DHW Integrated Type



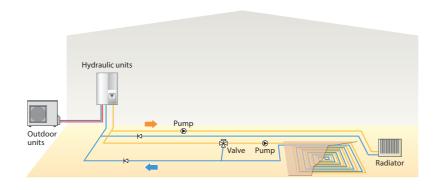
WATERSTAGE"

Case Studies

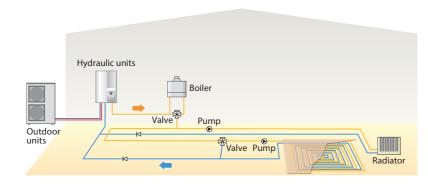
Split Type

2-emitter simultaneous heating (Individual control)

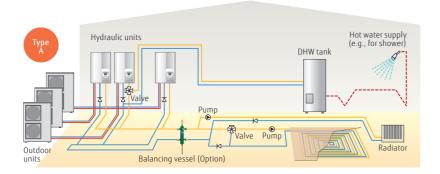
Underfloor heating + Radiator

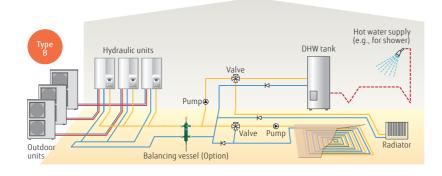


Boiler connected to heating (Boiler + Heating)



2-emitter simultaneous heating & domestic hot water supply (Cascade)



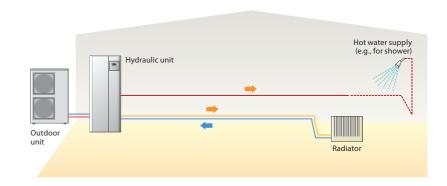


*The hydraulic layouts shown are mainly representation. Please check with local dealer for actual hydraulic connections."

Split DHW Integrated Type

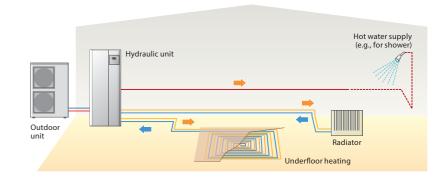
Single heating & domestic hot water supply

Radiator + domestic hot water supply

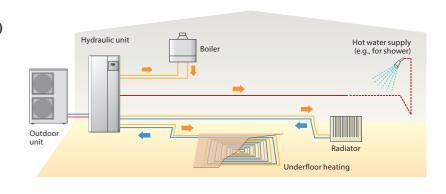


2-emitter simultaneous heating (Individual control) & domestic hot water supply

Radiator + domestic hot water supply



Boiler connected to heating (Boiler + Heating) and domestic hot water supply

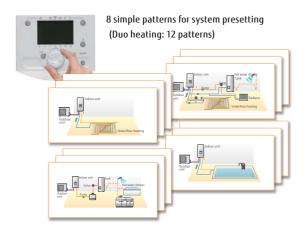


 ${\bf *The\ hydraulic\ layouts\ shown\ are\ mainly\ representation.\ Please\ check\ with\ local\ dealer\ for\ actual\ hydraulic\ connections."}$

Simple installation

Presetting configurations

A controller installed makes it easy to configure the system without having to set each component or unit individually.

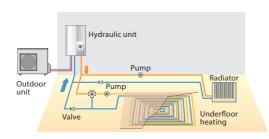


Configuration (Parameter 5700)	Installation type
Presetting 1	1 heating circuit
Presetting 2	2 heating circuits
Presetting 3	1 heating circuit with boiler backup
Presetting 4	2 heating circuits with boiler backup
Presetting 5	1/2 heating circuit with buffer control
Presetting 6	1/2 heating circuit with buffer control and boiler backup
Presetting 7	Cascade connection Primary
Presetting 8	Cascade connection A
Presetting 9	Cascade connection B/C

- DHW & solar control auto detection
- Pool heating and cooling option

Outdoor temperature simulation

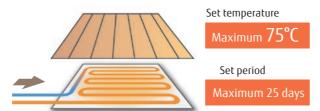
It verifies that each unit operates properly under the set conditions and expected outdoor air temperature when the system is actually assembled.



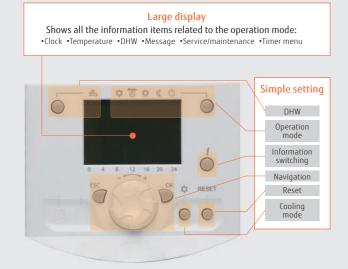
The outdoor temperatures can be simulated in the range of -50° C to $+50^{\circ}$ C.

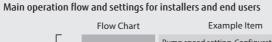
Concrete floor drying

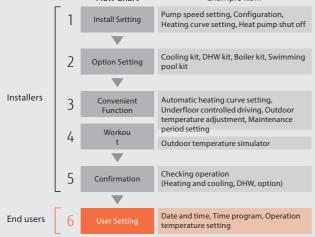
Allows the concrete surrounding the hot-water pipes to dry more quickly, shortening the construction period for underfloor heating installations.



Controller with a large liquid crystal display and buttons for easy function setting

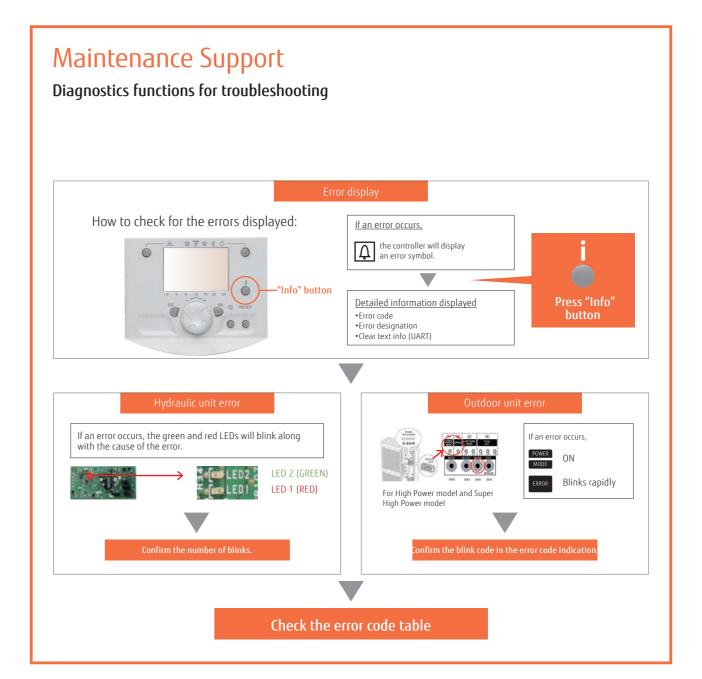






Easy Installation & Maintenance

- All hydraulic safety and control components are built in with no additional selection required.
- Lifting bars for installation free of difficulty or risk
- Easy access for maintenance
- Refrigerant pump down operation

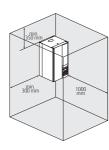


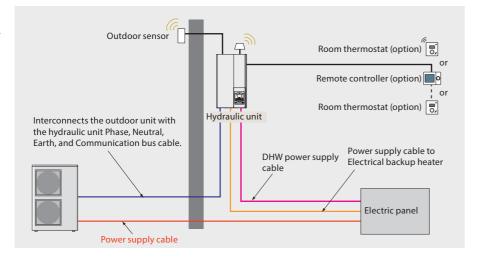
Installation requirements

Installation of equipment & electrical wiring

Split type Hydraulic unit

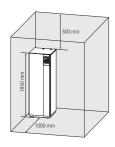
- The Hydraulic unit is hung on the wall.
 Weight ≤ 88 kg (including water)
- Space for maintenance needs to be taken into consideration.

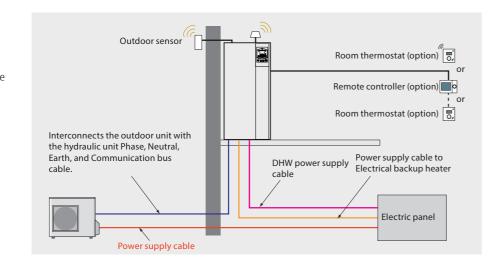




Split DHW Integrated Type Hydraulic Unit

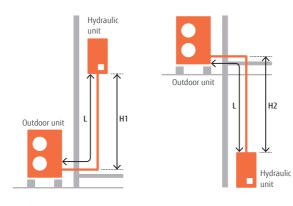
- Floor standing Weight ≤ 393 kg (including water)
- Space for maintenance needs to be taken into consideration.





Piping and Wiring Split type

Series	Capacity range (kW)	Pipe diameter (Liquid/Gas) (mm)	H1 (m)	H2 (m)	L (m)		
	5						
R32	nfort 8		+20	-20	3-30		
Comfort	8		120	-20	2-30		
	10	9.52/15.88					
	11						
High Power	14	9.52/15.88	+15	-15	5-20		
	16						
	15						
Super High Power	16	9.52/15.88	+15	-25	5-30		
riigii i owei	17						





Optional Parts

Product Name	Model Nar	ne		Super Jh Pov 3		1	Hi Ø	Split gh Po	Type wer 3Ø				omfor Ø	t	Hio 1Ø	Super gh Pov	ver Ø		plit DI Hi	HW Int		ed Typ		R32 C	omfor Ø	i
	UTW-KZS)	KE	16	15 _	17 _	•	14	•	14	16	5	6	8	10	16 _	15 -	17 _	-	14	11 -	14	16 _	5	6	8	10
	_	KE	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	•	•	•	•	•	•	•	•	•
Second circuit Kit —	UTW-KZS	XJ	•	•	•	_	_	_	_	_	_	_	_	_	_	_	-	-	_	_	_	_	-	-	_	-
	UTW-KZD	XJ	-	_	_	_	_	_	_	_	_	_	_	_	•	•	•	-	_	_	_	_	-	-	_	-
I	UTW-KBSX	(D	=	-	-	•	•	•	•	•	•	•	•	•	_	_	-	_	_	-	_	-	-	_	_	-
Boiler connection kit	UTW-KBD)	KD		-	_	_	_	-	_	_	_	_	_	_	_	-	-	•	•	•	•	•	•	•	•	•
DUO 1	UTW-KBS	XJ	•	•	•	-	-	-	-	-	-	-	-	-	•	•	•	-	-	-	-	-	-	_	_	-
Balancing vessel	UTW-TEVX	(A	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHW kit	UTW-KDW: (External		•	•	•	•	•	•	•	•	•	•	•	•	_*1	_*1	_*1	_*1	_*1	_*1	_*1	-* ¹	-* ¹	_*1	_*1	_*1
200 Liters 300 Liters	UTW-T20A: UTW-T30A:		•	•	•	•	•	•	•	•	•	•	•	•	_*1	_* ¹	_*1	_*1	_* ¹	_*1	_*1	_*1	_*1	_*1	_* ¹	_*1
200 Liters 300 Liters	UTW-T20B. UTW-T30B.		•	•	•	•	•	•	•	•	•	•	•	•	-*1	_*1	_*¹	-* ¹	_*1	_*1	-* ¹	-* ¹	-* ¹	_*1	_*1	_*1
DHW expansionkit	UTW-KDE	ΧE	-	_	-	_	-	_	_	-	_	_	-	-	•	•	•	•	•	•	•	•	-	_	_	-
	UTW-KDEX	XL	-	-	-	-	-	_	_	_	-	-	_	-	_	_	-	-	_	-	_	-	•	•	•	•
Circulating pump	UTW-PHF)	KG	•	•	•	•	•	•	•	•	-	-	-	_	•	•	•	•	•	•	•	•	-	-	_	-
Swimming pool kit	UTW-KSPXI	D*6	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cooling kit —	UTW-KCLX	(D	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-
430		(L	-	-	-	_	-	-	_	-	_	-	_	_	_	-	-	-	-	_	_	_	•	•	•	•
Regulation extension kit	UTW-KREX	(D	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Drain pan		ΚB	=	-	-	=	-	_	=	=	•	•	•	•	=	=	-	-	=	-	=	=	•	•	•	•
Cascade master kit (incl. LPB clip)	UTW-KCM	XE	-	-	_	•	•	•	•	•	_	_	_	_	_	-	_	-	-	_	_	_	-	-	_	-

	Model Name		Split Type											Split DHW Integrated Type											
		Tilgit Fowei											Super High Power			High Power									
			_	Ø 17		Ø 14		3Ø			6	Ø 8		1Ø 16	15	Ø 17	11 11	Ø 14	11	3Ø				Ø 8	
ascade slave kit incl. LPB clip)	UTW-KCSXE	-	-	-	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MI kit	UTW-KHMXE*2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Remote Wired Controller	UTW-C74TXF* ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	UTW-C74HXF* ²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Wired 0	UTW-C55XA	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
thermostat Wireless	UTW-C58XD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
outdoor sensor (%.	UTW-MOSXD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
F (//• nodules for BSB-Port	UTW-MRCXD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
/eb server	UTW-KW1XD UTW-KW4XD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
PB clip	UTW-KL1XD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
IODBUS® clip	UTW-KMBXJ	●* ⁵	●* ⁵	●* ⁵	●* ⁵	•* ⁵	●* ⁵	●* ⁵	●* ⁵	_	-	-	_	●* ⁵	●* ⁵	●* ⁵	●* ⁵	●* ⁵	●* ⁵	●* ⁵	●* ⁵	-	_	-	-
ervice tool ncl. 0CI700 dapter)	UTW-KSTXD	●* ³	●* ³	●*³	●* ³	●* ³	●* ³	●* ³	●*³	●* ³	● * ³	●* ³	●* ³	●* ³	●* ³	●* ³	●* ³	●* ³	●*³	●*³	●* ³	●* ³	●* ³	● * ³	•
ervice tool oftware	UTW-KPSXD	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	●* ⁴	•									
External connect kit	UTY-XWZXZ2	_	-	-	•	•	•	•	•	-	-	_	_	-	-	-	•	•	•	•	•	-	-	-	
	UTY-XWZXZ3	•	•	•	-	-	-	_	_	_	-	_	_	•	•	•	_	_	_	_	_	_	_	_	
ectrical backup eater relay	UTW-KBHXL	-	-	_	-	-	-	-	_	•	•	•	•	-	_	_	-	-	_	_	-	•	•	•	,

●: Available —: Not Available

W-036 W-037

^{*1:} Split DHW integrated type supplies DHW without the DHW kit and DHW tank.

*2: Includes 19 languages with no need to prepare an RC for Eastern Europe separately.

C74TXF has a built-in room temperature sensor.

C74HXF has a built-in room temperature and humidity sensor.

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

*4: UTW-KWIXD or UTW-KW4XD is required for the connection.

*5: Additional optional parts required.

*6: When using the Swimming pool kit (UTW-KSPXD), other devices (Radiator, DHW tank etc.) cannot be connected in the same system.