



Commercial Air Conditioners **2016**



Air Source Heat Pump

Midea CAC

Midea CAC is a key division of the Midea Group, a leading producer of consumer appliances and provider of heating, ventilation and air conditioning solutions. Midea CAC has continued with the tradition of innovation upon which it was founded, and emerged as a global leader in the HVAC industry. A strong drive for advancement has created a groundbreaking R&D department that has placed Midea CAC at the forefront of a competitive field. Through these independent efforts and joint cooperation with other global enterprises, Midea has supplied thousands of innovative solutions to customers worldwide.



There are three production bases: Shunde, Chongqing and Hefei.

MCAC Shunde: 38 product lines focusing on VRF, Split Products, Heat Pump Water Heaters, and AHU/FCU.

MCAC Chongqing: 14 product lines focusing on Water Cooled Centrifugal/Screw/Scroll Chillers, Air Cooled Screw/Scroll Chillers, and AHU/FCU.

MCAC Hefei: 11 product lines focusing on VRF, Chillers, and Heat Pump Water Heaters.



- 2015 >> JV with Carrier in China in chiller field, BOSCH in VRF production and Siix in smart control
- 2013 >> Launched combo type 300L products adopted enamel water tank
- 2012 >> Introduced the professional production line EISENMAN from German
- 2011 >> Launched the first generation of M-thermal products
- 2010 >> Built the 3rd manufacturing base in Hefei
- 2008 >> Launch the first generation of combo type products
- 2007 >> Cooperated with GE to develop combo type air source heat pump
- 2004 >> Launch the first generation of direct heating products
- 2003 >> Entered the air source heat pump field and launched the first generation cycle heating products
- 1999 >> Entered the CAC field

Midea Company
Introduction



Midea CAC
Introduction

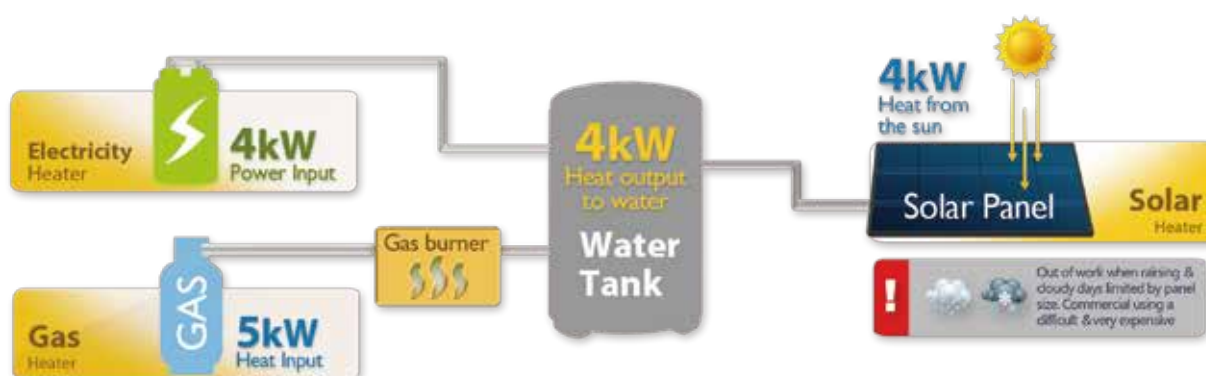


Renewable

Heat pump is renewable and energy saving



Why select HPWH?



Comparison of the power needed to heat 1 ton water from 15°C to 55°C under the same conditions (Data from Midea)

	Midea HPWH	Gas Water Heater	Electric Water Heater	Boiler	Solar Water Heater
Energy Resource	Air, electricity	Gas	Electricity	Diesel oil	Solar, electricity
Calorific Value	860kcal/kW.h	24000kcal/m ³	860kcal/kW.h	10200kcal/kg	860kcal/kW.h
Average Efficiency	4.6	0.8	0.95	0.7	2.7 (1/3 weather need Auxiliary Heater)
Consumption	10kW.h	2.08m ³	48.9kW.h	5.6kg	17.22kW.h
Running Cost(USD)	0.9	5.9	4.3	6.5	1.5
Merit/Demerit	Green, safe, energy saving, friendly for environment and easy for installation	Risk of fire and explosion, emits CO ₂	Risk of electric shocks.	Risk of fire and explosion, emits CO ₂	Difficult to install, takes up a lot of space, water tank capacity is limited.

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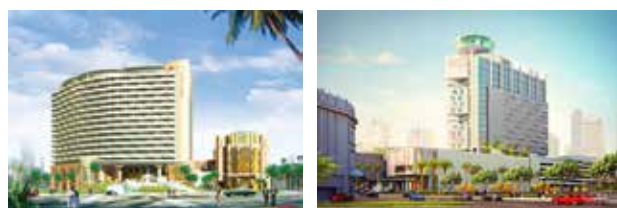
19 M-Thermal



27 Commercial Application



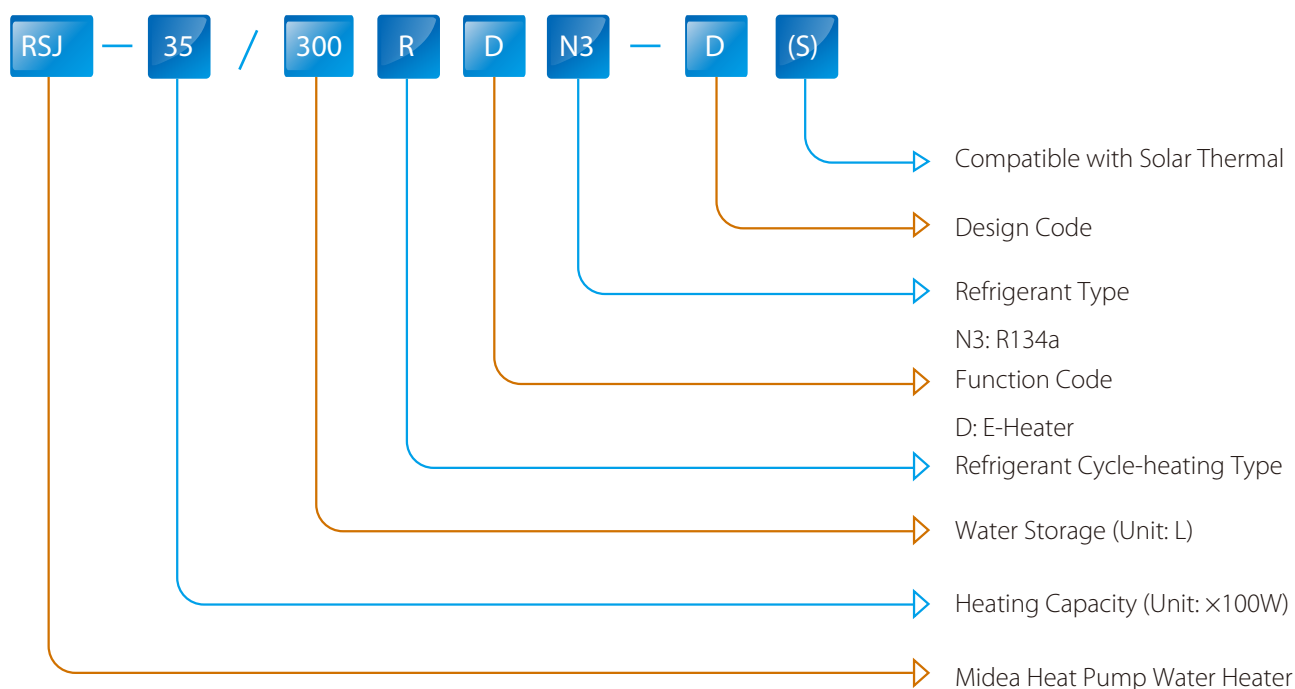
33 Reference projects



Sanitary Hot Water Combo Type



Nomenclature



Features

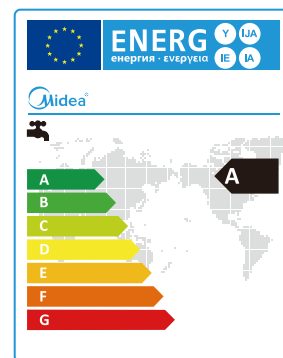
Environmental protection >>

- ❖ Environmentally friendly refrigerant R134a is used.
- ❖ No discharge of poisonous gas.
- ❖ No pollution to atmosphere and environment.



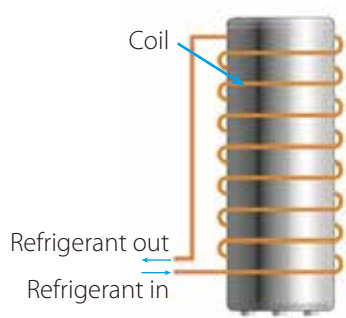
High heating energy efficiency >>

The unit adopts heat pump principle, which absorbs heat from ambient air and releases it to the water to produce hot water. Seasonal water heating energy efficiency class ups to A.



Safety >>

- ❖ Complete isolation between water and electricity without electric shock problem.
- ❖ No fuel tubes and storage, no potential danger from oil leakage, fire, explosion, and so on.
- ❖ No cross contamination potential, the condenser coil is wrapped around the inner tank.



Easy installation >>

- ❖ Integral designed and just need to connect water pipes.
- ❖ 25Pa external static pressure enables air duct up to 10m.
- ❖ Flexible duct installation.

Living room



Dining room



Cellar



Storage room



Note: RSJ-15/190RDN3-C is not available for duct connection



Combo Type 190L

RSJ-15/190RDN3-C

- ❖ A rated energy efficiency
- ❖ Running ambient temperature -20~43°C
- ❖ Water output temperature 38~70°C
- ❖ 8 key LCD display panel
- ❖ Wired controller optional
- ❖ Automatic weekly disinfect function



Specifications

Model			RSJ-15/190RDN3-C		
Power supply	V/Ph/Hz		220-240/1/50		
Running mode			Economy	Hybrid	E-heater
Running ambient temperature	°C		5~43	-20~43	-20~43
Output water temperature	°C		Default 60°C, 38°C~70°C		
Storage size	Ltr		190		
Capacity ¹	kW		1.50	Heat pump:1.50; E-heater:2.15	2.15
COP			3.50	Heat pump:3.50; E-heater:1.00	1.00
Max. current	A		2.3	12.1	9.3
Water heating energy efficiency class			A		
Dimension (D×H)	mm		Φ568×1,580		
Packing (W×H×D)	mm		730×1,660×700		
Net/gross weight	kg		90/101		
Sound pressure level ²	dB(A)		48		
Sound power level	dB(A)		58		
Compressor	Type		Rotary		
Fan motor	Type		AC Motor		
Air side heat exchanger	Type		Fin-coil		
Water side heat exchanger	Type		Dividing wall type heat exchanger		
Refrigerant	Type/Quantity	kg	R134a/0.8		
	Throttle type		Electric expansion valve		
Water pipeline	Water inlet pipe	mm	DN20		
	Water outlet pipe	mm	DN20		
	Drainage pipe	mm	DN20		
	PTR valve joint	mm	DN20		
E-heater	kW		2.15		
Hot water yield	m ³ /h		0.043	0.053	0.062
Applicable persons			3~4		

Remark:

1. The test conditions: outdoor temperature 15/12°C(DB/WB), initial water temperature in the units is 15°C, terminal water temperature is 45°C.
2. Sound pressure value test conditions: four side of the unit, distance is 1m, and height is 1m + half of the unit's height.
3. The above data test reference standard EN16147:2011; EN60379:2004; EN12103:2011; (EU)No:812:2013; (EU)No:814:2013.
4. The specifications may be changed for product improvement without notice.



Combo Type 190L

RSJ-15/190RDN3-F

- ❖ 25Pa air flow pressure enables ducted length up to 10m
- ❖ A rated energy efficiency
- ❖ Running ambient temperature -20~43°C
- ❖ Water output temperature 38~70°C
- ❖ 9 key LCD display panel
- ❖ Automatic weekly disinfect function



Specifications

Model			RSJ-15/190RDN3-F	
Power supply	V/Ph/Hz		220-240/1/50	
Heat Source			Economy	E-heater
Running ambient temperature	°C		-7~43	-20~43
Output water temperature	°C		Default 60°C, 38°C~70°C	
Storage size	Ltr		190	
Capacity ¹	kW		1.45	3.15
COP			3.80	1.00
Max. current	A		16	
Water heating energy efficiency class			A	
Dimension (D×H)	mm		Φ560×1,760	
Packing (W×H×D)	mm		695×1,805×685	
Net/gross weight	kg		107/120	
Sound pressure level ²	dB(A)		42	
Sound power level	dB(A)		58	
Compressor	Type		Rotary	
Fan motor	Type		AC Motor	
Air side heat exchanger	Type		Fin-coil	
Water side heat exchanger	Type		Dividing wall type heat exchanger	
Refrigerant	Type/Quantity	kg	R134a/1.0	
	Throttle type		Electric expansion valve	
Water pipeline	Water inlet pipe	mm	DN20	
	Water outlet pipe	mm	DN20	
	Drainage pipe	mm	DN20	
	PTR valve joint	mm	DN20	
E-heater	kW		2.15	
Hot water yield	m³/h		0.043	0.086
Applicable persons			3~4	

Remark:

1. The test conditions: outdoor temperature 15/12°C(DB/WB), initial water temperature in the units is 15°C, terminal water temperature is 45°C.
2. Sound pressure value test conditions: four side of the unit, distance is 1m, and height is 1m + half of the unit's height.
3. The above data test reference standard EN16147:2011; EN60379:2004; EN12103:2011; (EU)No:812:2013; (EU)No:814:2013.
4. The specifications may be changed for product improvement without notice.



Combo Type 300L (Stainless Tank)

RSJ-35/300RDN3-B

RSJ-35/300RDN3-C

- ❖ Optional built-in heat exchanger, compatible with solar thermal or boilers
- ❖ 25Pa air flow pressure enables ducted length up to 10m
- ❖ A rated energy efficiency
- ❖ Running ambient temperature -20~43°C
- ❖ Water output temperature 38~60°C
- ❖ 8 key LCD display panel
- ❖ Wired controller optional



Specifications

Model			RSJ-35/300RDN3-B			RSJ-35/300RDN3-C		
Power supply	V/Ph/Hz		220-240/1/50			220-240/1/50		
Running mode			Economy	Hybrid	E-heater	Economy	Hybrid	E-heater
Running ambient temperature	°C		-7~43	-20~43	-20~43	-7~43	-20~43	-20~43
Output water temperature	°C		Default 55,38~60			Default 55,38~60		
Storage size	Ltr		300			300		
Capacity ¹	kW		3.00	3.00	3.00	3.00	3.00	3.00
COP			3.60	3.60	1.00	3.60	3.60	1.00
Max. current	A		6.5	18.7	13.0	6.5	18.7	13.0
Water heating energy efficiency class			A			A		
Dimension (DxH)	mm		Φ650×1,920			Φ650×1,920		
Packing (WxHxD)	mm		750×2,150×780			750×2,150×780		
Net/gross weight	kg		133/160			130/156.5		
Sound pressure level ²	dB(A)		48			48		
Sound power level	dB(A)		60			60		
Compressor	Type		Rotary			Rotary		
Fan motor	Type		AC Motor			AC Motor		
Air side heat exchanger	Type		Fin-coil			Fin-coil		
Water side heat exchanger	Type		Dividing wall type heat exchanger			Dividing wall type heat exchanger		
Refrigerant	Type/Quantity	kg	R134a/1.2			R134a/1.2		
	Throttle type		Electric expansion valve			Electric expansion valve		
Water pipeline	Water inlet pipe	mm	DN20			DN20		
	Water outlet pipe	mm	DN20			DN20		
	Drainage pipe	mm	DN20			DN20		
	PTR valve joint	mm	DN20			DN20		
Solar heat exchanger	Water inlet pipe	mm	DN20			/		
	Water outlet pipe	mm	DN20			/		
E-heater	kW		3			3		
Hot water yield	m ³ /h		0.086			0.086		
Applicable persons			5~6			5~6		

Remark:

1. The test conditions: outdoor temperature 15/12°C(DB/WB), initial water temperature in the units is 15°C, terminal water temperature is 45°C.
2. Sound pressure value test conditions: four side of the unit, distance is 1m, and height is 1m + half of the unit's height.
3. The above data test reference standard EN16147:2011; EN60379:2004; EN12103:2011; (EU)No:812:2013; (EU)No:814:2013.
4. The specifications may be changed for product improvement without notice.



Combo Type 300L (Stainless Tank)

RSJ-35/300RDN3-D

RSJ-35/300RDN3-D(S)

- ❖ Optional built-in heat exchanger, compatible with solar thermal or boilers
- ❖ 25Pa air flow pressure enables ducted length up to 10m
- ❖ A rated energy efficiency
- ❖ Running ambient temperature -20~43°C
- ❖ Water output temperature 38~60°C
- ❖ 9 key LCD display panel
- ❖ Automatic weekly disinfect function



Specifications

Model			RSJ-35/300RDN3-D(S)		RSJ-35/300RDN3-D	
Heat Source			Economy	E-heater	Economy	E-heater
Running ambient temperature	°C		-7~43	-20~43	-7~43	-20~43
Output water temperature	°C		Default 55,38~		Default 55,38~60	
Power supply	Ph, V, Hz		220-240/1/50		220-240/1/50	
Storage size	Ltr		300		300	
Capacity ¹	kW		3.00	3.00	3.00	3.00
COP			3.60	1.00	3.60	1.00
Max. current	A		6.5	13.0	6.5	13.0
Water heating energy efficiency class			A		A	
Dimension (DxH)	mm		Φ650×1,920		Φ650×1,920	
Packing (WxHxD)	mm		750×2,150×780		750×2,150×780	
Net/gross weight	kg		123/150		117/144	
Sound pressure level ²	dB(A)		48		48	
Sound power level	dB(A)		60		60	
Compressor	Type		Rotary		Rotary	
Fan motor	Type		AC Motor		AC Motor	
Air side heat exchanger	Type		Fin-coil		Fin-coil	
Waterside heat exchanger	Type		Dividing wall type heat exchanger		Dividing wall type heat exchanger	
Refrigerant	Type/Quantity	kg	R134a/1.2		R134a/1.2	
	Throttle type		Electric expansion valve		Electric expansion valve	
Water pipeline	Water inlet pipe	mm	DN20		DN20	
	Water outlet pipe	mm	DN20		DN20	
	Drainage pipe	mm	DN20		DN20	
	PTR valve joint	mm	DN20		DN20	
Solar heat exchanger	Water inlet pipe	mm	DN20		/	
	Water outlet pipe	mm	DN20		/	
E-heater		kW	3		3	
Hot water yield		m ³ /h	0.086		0.086	
Applicable persons			5~6		5~6	

Remark:

1. The test conditions: outdoor temperature 15/12°C(DB/WB), initial water temperature in the units is 15°C, terminal water temperature is 45°C.
2. Sound pressure value test conditions: four side of the unit, distance is 1m, and height is 1m + half of the unit's height.
3. The above data test reference standard EN16147:2011; EN60379:2004; EN12103:2011; (EU)No:812:2013; (EU)No:814:2013.
4. The specifications may be changed for product improvement without notice.



Combo Type 300L (Enamel Tank)

RSJ-35/300RDN3-E1

- ❖ Enamel water tank
- ❖ 25Pa air flow pressure enables ducted length up to 10m
- ❖ A rated energy efficiency
- ❖ Running ambient temperature -20~43°C
- ❖ Water output temperature 38~65°C
- ❖ 8 key LCD display panel
- ❖ Automatic weekly disinfect function



Specifications

Model			RSJ-35/300RDN3-E1		
Power supply	V/Ph/Hz		220-240/1/50		
Running mode			Economy	Hybrid	E-heater
Running ambient temperature	°C		-7~43	-20~43	-20~43
Output water temperature	°C		Default 55,38~65		
Storage size	Ltr		300		
Capacity ¹	kW		3.00	3.00	3.00
COP			3.76	3.76	1.00
Max. current	A		6.5	18.7	13.0
Water heating energy efficiency class			A		
Dimension (D×H)	mm		Φ650×1,920		
Packing (W×H×D)	mm		750×2,150×780		
Net/gross weight	kg		145.5/175.5		
Sound pressure level ²	dB(A)		45		
Sound power level	dB(A)		56		
Compressor	Type		Rotary		
Fan motor	Type		AC Motor		
Air side heat exchanger	Type		Fin-coil		
Water side heat exchanger	Type		Dividing wall type heat exchanger		
Refrigerant	Type/Quantity	kg	R134a/1.2		
	Throttle type		Electric expansion valve		
Water pipeline	Water inlet pipe	mm	DN20		
	Water outlet pipe	mm	DN20		
	Drainage pipe	mm	DN20		
	PTR valve joint	mm	DN20		
E-heater	kW		3		
Hot water yield	m ³ /h		0.086		
Applicable persons			5~6		

Remark:

1. The test conditions: outdoor temperature 15/12°C(DB/WB), initial water temperature in the units is 15°C, terminal water temperature is 45°C.
2. Sound pressure value test conditions: four side of the unit, distance is 1m, and height is 1m + half of the unit's height.
3. The above data test reference standard EN16147:2011; EN60379:2004; EN12103:2011; (EU)No:812:2013; (EU)No:814:2013.
4. The specifications may be changed for product improvement without notice.



Combo Type 300L (Enamel Tank)

RSJ-35/300RDN3-F1

- ❖ Enamel water tank
- ❖ 25Pa air flow pressure enables ducted length up to 10m
- ❖ A rated energy efficiency
- ❖ Running ambient temperature -20~43°C
- ❖ Water output temperature 38~65°C
- ❖ 9 key LCD display panel
- ❖ Automatic weekly disinfect function



Specifications

Model			RSJ-35/300RDN3-F1	
Power supply		V/Ph/Hz	220-240/1/50	
Heat Source			Economy	E-heater
Running ambient temperature		℃	-7~43	-20~43
Output water temperature		℃	Default 55,38~65	
Storage size		Ltr	300	
Capacity ¹		kW	3.00	3.00
COP			3.60	1.00
Max. current		A	6.5	13.0
Water heating energy efficiency class			A	
Dimension (DxH)		mm	Φ650×1,920	
Packing (WxHxD)		mm	750×2,150×780	
Net/gross weight		kg	145.5/175.5	
Sound pressure level ²		dB(A)	45	
Sound power level		dB(A)	58	
Compressor	Type		Rotary	
Fan motor	Type		AC Motor	
Air side heat exchanger	Type		Fin-coil	
Water side heat exchanger	Type		Dividing wall type heat exchanger	
Refrigerant	Type/Quantity	kg	R134a/1.2	
	Throttle type		Electric expansion valve	
Water pipeline	Water inlet pipe	mm	DN20	
	Water outlet pipe	mm	DN20	
	Drainage pipe	mm	DN20	
	PTR valve joint	mm	DN20	
E-heater		kW	3	
Hot water yield		m³/h	0.086	
Applicable persons			5~6	

Remark:

1. The test conditions: outdoor temperature 15/12°C(DB/WB), initial water temperature in the units is 15°C, terminal water temperature is 45°C.
2. Sound pressure value test conditions: four side of the unit, distance is 1m, and height is 1m + half of the unit's height.
3. The above data test reference standard EN16147:2011; EN60379:2004; EN12103:2011; (EU)No:812:2013; (EU)No:814:2013.
4. The specifications may be changed for product improvement without notice.



Combo Type 300L (60Hz)

RSJ-35/300RDN3

- ❖ 25Pa air flow pressure enables ducted length up to 10m
- ❖ Running ambient temperature -20~43°C
- ❖ Water output temperature 38~65°C
- ❖ 9 key LCD display panel
- ❖ Automatic weekly disinfect function

Specifications

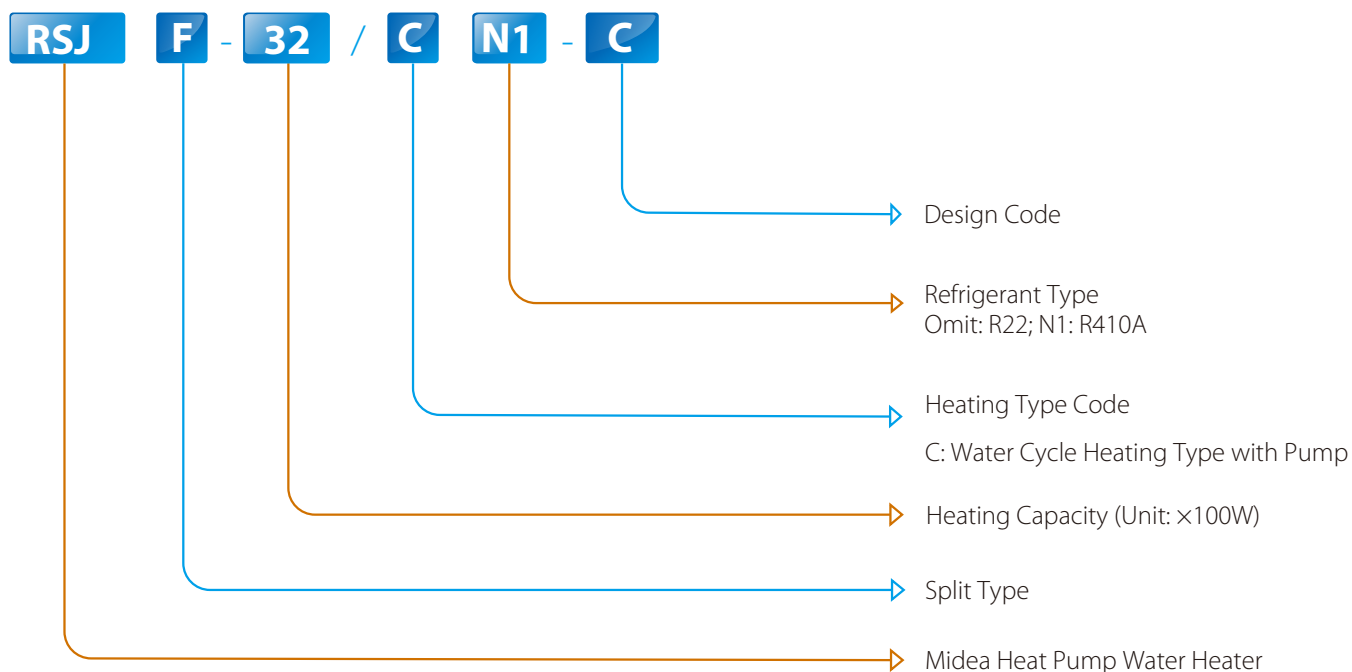
Model			RSJ-35/300RDN3	
Power supply	V/Ph/Hz		220/1/60	
Running ambient temperature	°C		-7~43	-20~43
Output water temperature	°C		Default 55,38~60	
Storage size	Ltr		300	
Capacity ¹	kW		3.40	3.00
COP			3.50	1.00
Max. current	A		20.6	
Dimension (D×H)	mm		Φ650×1,920	
Packing (W×H×D)	mm		750×2,150×780	
Net/gross weight	kg		117/148	
Sound pressure level ²	dB(A)		48	
Sound power level	dB(A)		60	
Compressor	Type		Rotary	
Fan motor	Type		AC Motor	
Air side heat exchanger	Type		Fin-coil	
Water side heat exchanger	Type		Dividing wall type heat exchanger	
Refrigerant	Type/Quantity	kg	R134a/1.2	
	Throttle type		Electric expansion valve	
Water pipeline	Water inlet pipe	mm	DN20	
	Water outlet pipe	mm	DN20	
	Drainage pipe	mm	DN20	
	PTR valve joint	mm	DN20	
E-heater		kW	3	
Hot water yield		m ³ /h	0.094	0.086
Applicable persons			5~6	

Remark:

1. The test conditions: outdoor temperature 15/12°C(DB/WB), initial water temperature in the units is 15°C, terminal water temperature is 45°C.
2. Sound pressure value test conditions: four side of the unit, distance is 1m, and height is 1m + half of the unit's height.
3. The specifications may be changed for product improvement without notice.



Nomenclature



Features

- ❖ Environmentally friendly refrigerant R410A is used.
- ❖ Max. water output temperature: 60°C.
- ❖ Automatic startup and shutdown, automatic defrost.
- ❖ Close refrigerant circuit, easy for plumber installation.
- ❖ Built-in water pump.
- ❖ New touch-style key wired controller KJR-51/BMKE-A is used for easy operation.
- ❖ Products adopted double-wall heat exchanger is optional.



Double-wall heat exchanger

Wired Controller

- ❖ Touch key operation.
- ❖ LCD displays operation parameters.
- ❖ Multiple timers.
- ❖ Real-time clock function.
- ❖ Power-off memory function.



Note:

It can be applied to most of the Midea HPWH models by properly setting.

Specifications

Model			RSJF-32/CN1-B	RSJF-50/CN1-B	RSJF-72/CN1-B1
Power supply		Ph/V/Hz	220-240/1/50		
Running ambient temperature		°C	-7~43	-7~43	-7~43
Output water temperature		°C	Default 50°C, 40°C~60°C		
Water heating	Capacity	kW	3.00	4.30	6.50
	Input	kW	0.81	1.11	1.80
	COP		3.70	3.87	3.61
	Max. current	A	7.5	8.3	15.3
Dimension (WxHxD)		mm	790x765x275	790x765x275	845x945x335
Packing (WxHxD)		mm	905x807x355	905x807x355	965x1,009x395
Net/gross weight		kg	56/60	62/66	81/86.5
Outdoor noise level		dB(A)	53	55	55
Air flow		m³/h	2,000	2,000	3,200
Compressor	Type		Rotary	Rotary	Rotary
Fan motor	Type		AC Motor		
Water side heat exchanger	Type		Double-wall heat exchanger		
Air side heat exchanger	Type		Fin-coil		
Water pump	Pump head	m	5.5	5.5	5.5
	Water volume	L/min	10	10	10
Refrigerant	Type/Quantity	kg	R410A/0.95	R410A/1.2	R410A/1.3
	Throttle type		Electric expansion valve		
Water pipeline	Water inlet pipe	mm	DN20	DN20	DN20
	Water outlet pipe	mm	DN20	DN20	DN20
Controller			KJR-51/BMKE-A		
Hot water yield		m³/h	0.516	0.74	1.12
Storage size of optional tank		L	100~300	150~350	300~500

Model			RSJF-32/CN1-C	RSJF-50/CN1-C	RSJF-72/CN1-C
Power supply		Ph/V/Hz	220-240/1/50		
Running ambient temperature		°C	-7~43	-7~43	-7~43
Output water temperature		°C	Default 50°C, 40°C~60°C		
Water heating	Capacity	kW	3.00	4.30	6.50
	Input	kW	0.87	1.22	1.72
	COP		3.45	3.53	3.78
	Max. current	A	6.8	8.5	12.4
Dimension (WxHxD)		mm	790x765x275	790x765x275	845x945x335
Packing (WxHxD)		mm	905x807x355	905x807x355	965x1,009x395
Net/gross weight		kg	48/52	55/58	68.5/74
Outdoor noise level		dB(A)	53	55	55
Air flow		m³/h	2,000	2,000	3,200
Compressor	Type		Rotary	Rotary	Rotary
Fan motor	Type		AC Motor		
Water side heat exchanger	Type		Single-wall heat exchanger		
Air side heat exchanger	Type		Fin-coil		
Water pump	Pump head	m	5.5	5.5	5.5
	Water volume	L/min	10	10	10
Refrigerant	Type/Quantity	kg	R410A/0.7	R410A/0.9	R410A/1.0
	Throttle type		Electric expansion valve		
Water pipeline	Water inlet pipe	mm	DN20	DN20	DN20
	Water outlet pipe	mm	DN20	DN20	DN20
Controller			KJR-51/BMKE-A		
Hot water yield		m³/h	0.516	0.74	1.12
Storage size of optional tank		L	100~300	150~350	300~500

Remark:

1. The test conditions: outdoor temperature 7/6°C(DB/WB), inlet water temperature 30°C, outlet water temperature 35°C.
2. The specifications may be changed for product improvement, please refer to the nameplate.

Swimming Pool



Nomenclature

L RSJ - 60 / N Y N1 - A1

- Design Code
- Refrigerant Type
N1: R410A
- Available for Pool
- Water Cycle without Water Pump
- Heating Capacity (Unit: ×100W)
- Midea Heat Pump Water Heater
- Unit with Cooling Function

Features

- ❖ Titanium Heat exchanger.
- ❖ LCD display.
- ❖ CE approved.
- ❖ Automatic defrosting function.
- ❖ Heating and cooling mode.



Titanium

Conventional material

Titanium Heat Exchanger



Specifications

Model			LRSJ-60/NYN1-A1	LRSJ-80/NYN1-A1	LRSJ-120/NYN1-A1	LRSJ-140/NYN1-A1
Power supply			220-240/1/50			
Heating	Capacity	kW	6.00	8.00	11.70	13.60
	Input	kW	1.150	1.518	2.350	2.550
	COP		5.22	5.27	4.98	5.33
	Ambient temperature	°C	-7~38	-7~38	-7~38	-7~38
	Output water temperature	°C	Default 28°C, 20°C~35°C			
Cooling	Capacity	kW	4.00	5.80	8.25	10.35
	Input	kW	1.25	1.50	2.50	2.90
	Ambient temperature	°C	15~43	15~43	15~43	15~43
	Output water temperature	°C	Default 28°C, 10°C~30°C			
	EER		3.20	3.87	3.30	3.57
Max. current		A	6.3	8.0	13.7	16.0
Dimension (W×H×D)		mm	1,015×705×385	1,015×705×385	1,050×855×315	1,050×855×315
Packing (W×H×D)		mm	1,095×840×445	1,095×840×445	1,160×980×410	1,160×980×410
Net/Gross weight		kg	58.5/67.5	66/75	75/85	75/85
Outdoor noise level		dB(A)	58	58	58	58
Compressor	Type		Rotary	Rotary	Rotary	Rotary
Fan motor	Type		AC motor	AC motor	AC motor	AC motor
Water side heat exchanger	Type		Titanium-tube	Titanium-tube	Titanium-tube	Titanium-tube
Air side heat exchanger	Type		Fin-coil	Fin-coil	Fin-coil	Fin-coil
Refrigerant	Type/Quantity	kg	R410A/1.0	R410A/1.25	R410A/1.6	R410A/1.85
	Throttle type		Capillary	Capillary	Capillary	Capillary
Water pipeline	Water inlet pipe	mm	Φ50	Φ50	Φ50	Φ50
	Water outlet pipe	mm	Φ50	Φ50	Φ50	Φ50
	Drainage pipe	mm	Φ25	Φ25	Φ25	Φ25
Wire controller			KJRH-90B/E	KJRH-90B/E	KJRH-90B/E	KJRH-90B/E
Applicable range		m³	20	25	40	45~50

Remark:

1. The test conditions:

Water Heating: outdoor temperature 24/19°C(DB/WB), inlet water temperature 27°C, outlet water temperature 29°C

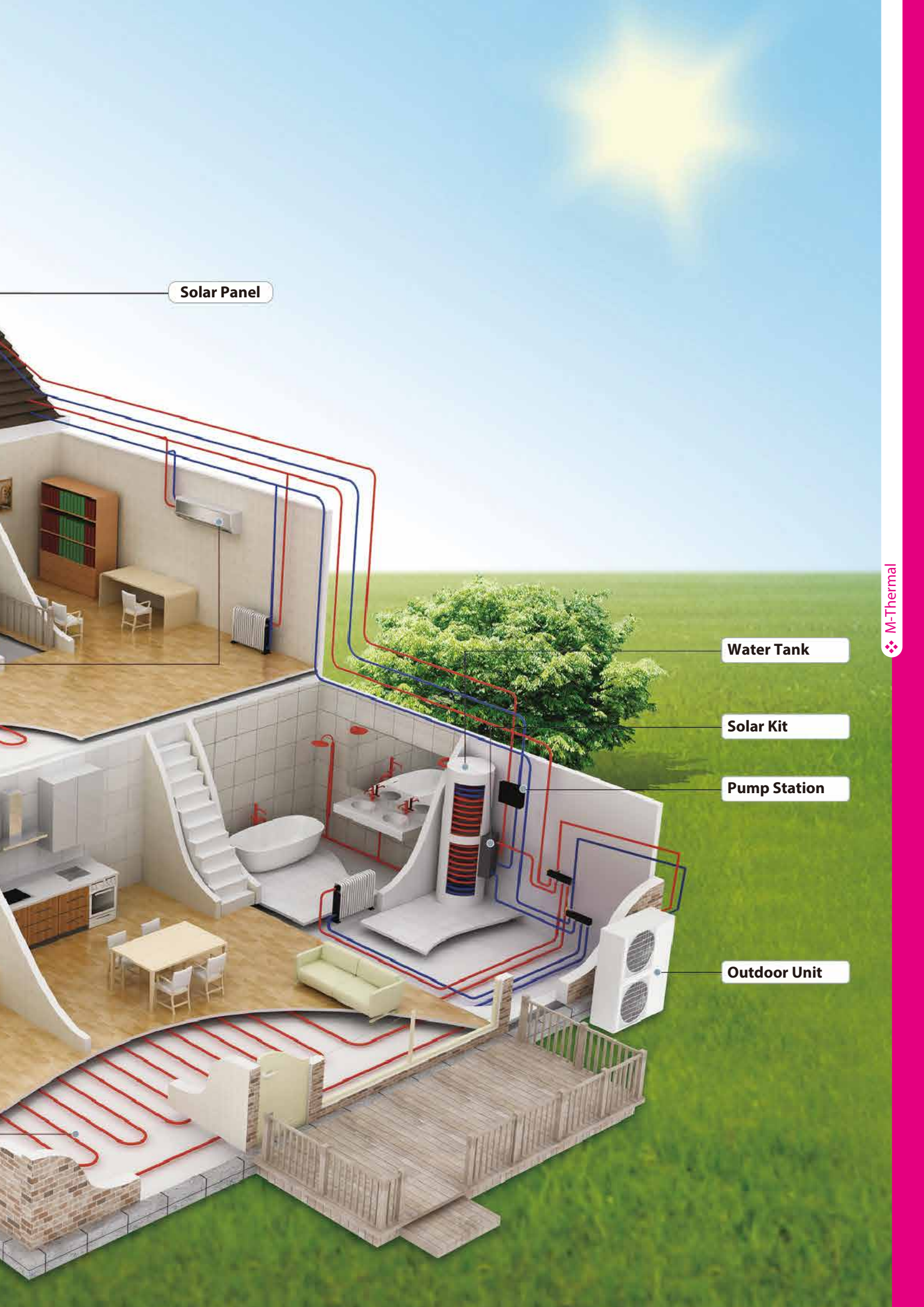
Water Cooling: outdoor temperature 35/24°C(DB/WB), inlet water temperature 27°C, the water flow volumn is same in both cooling and heating mode.

2. The specifications may be changed for product improvement, please refer to the nameplate.

M-Thermal

GREEN SOLUTION FOR SPACE HEATING AND SANITARY HOT WATER





Solar Panel

Water Tank

Solar Kit

Pump Station

Outdoor Unit

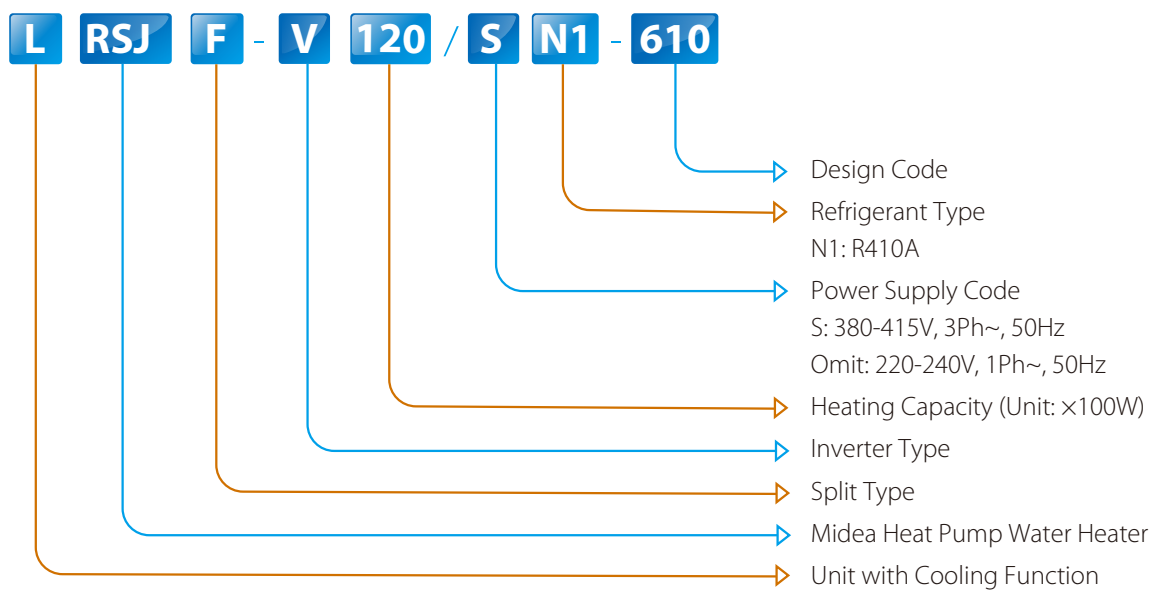
M-Thermal



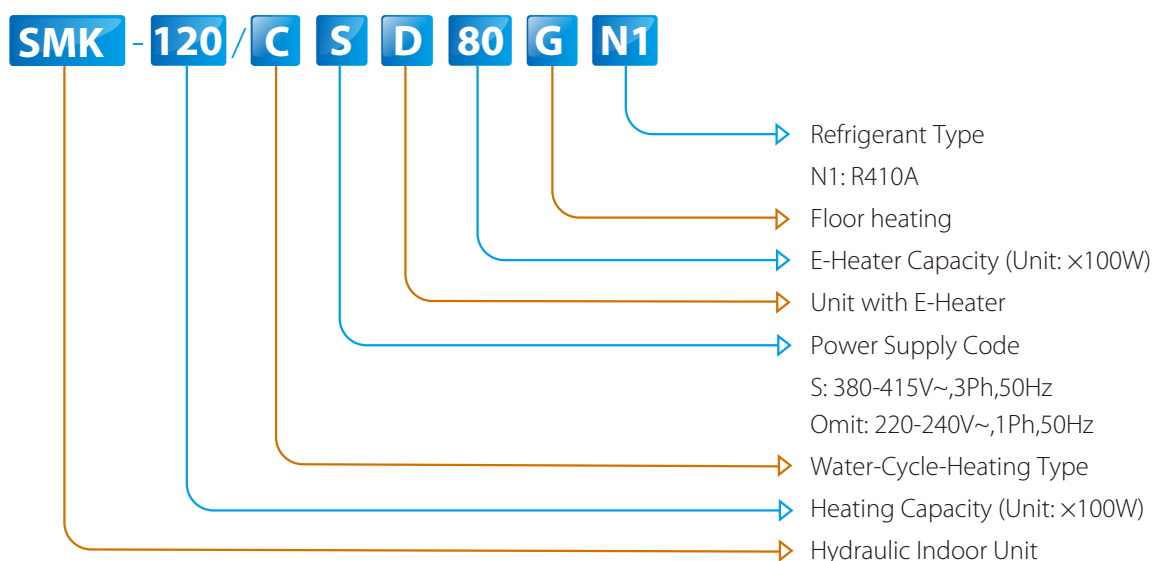
M-Thermal

Nomenclature

DC Inverter Outdoor Unit



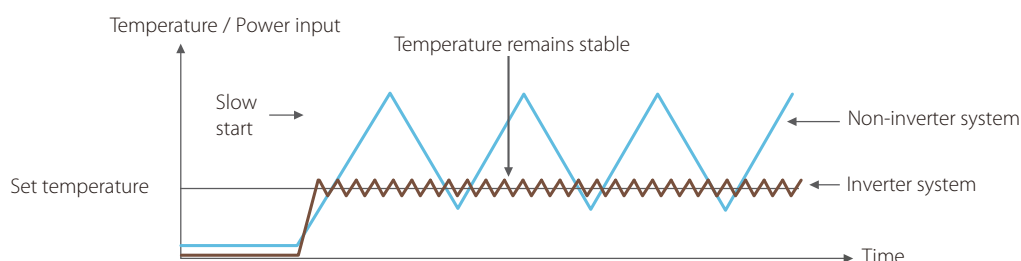
Hydraulic indoor unit



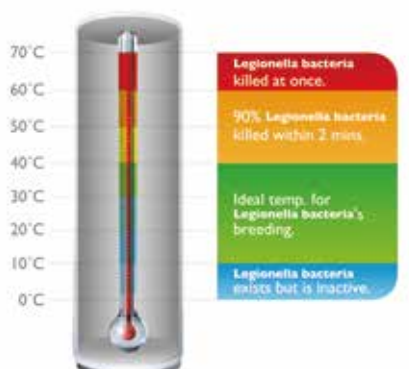
Features

- ❖ R410A gas, environmentally friendly.
- ❖ DC Inverter technology.

The advancement of the inverter technology creates more quiet, economical and powerful air conditioning systems.



- ❖ Automatic weekly anti-legionella function



- ❖ Compatible with solar thermal and boilers
- ❖ Total heating solution

When floor heating is conducted in a house, warm air spreads gently across the house, making it comfortable and enabling the use of broad space without necessitating radiators or FCU.

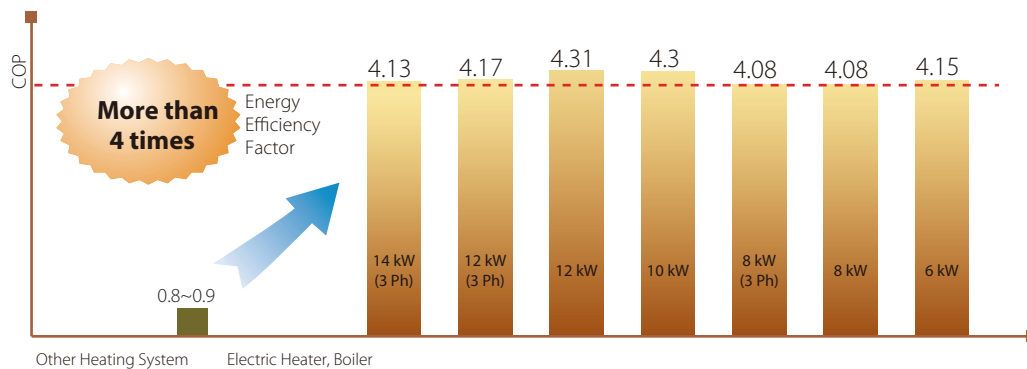
❖ Low running costs

When you use a gas or oil boiler, or an electric radiator, you can get exactly the same effect based on your input. The price of electricity is stable relative to those of oil or gas, thus cutting more costs as the time passes.

❖ Best heating efficiency

M-thermal, with the application of the same amount of energy, emits more than four energy items, which can be used. This is the strength of the Air to Water Heat pump to which inverter technology is applied.

Energy Efficiency Comparison



❖ Convenient and reliable system

1. M-thermal uses the Easy Controller to check detailed operational information and a change in temperature of the whole system.
2. Easy to handle and install.
3. Reliable Performance at lower temperatures.

❖ Comfort system

1. When floor heating is applied, warm air spreads gently across the house, making it comfortable. The system can help blood circulation and metabolism, further boosting our health.
2. The System is a four-season solution that can provide a heating solution in general and at the same time it also provides a cooling solution in summer.
3. M-Thermal does not require oil or gas, making the household surrounding neat and safe, enabling the use of more space, and avoiding refueling.

❖ Wired controller for easy operation

- ◆ Turning the unit ON/OFF.
- ◆ Operation mode change-over:
 - Space heating
 - Space cooling
 - Sanitary water heating
 - Space heating & Sanitary water heating
 - Space cooling & Sanitary water heating
- ◆ Selection of features:
 - Silent mode
 - Run test function
 - Air purge function
- ◆ Temperature set point adjustment.
- ◆ Real time clock & weekly timer function.



KJRH-120A/BT-E

Specifications

220~240-1Ph-50Hz

Hydraulic indoor unit			SMK-60/CD30GN1	SMK-80/CD30GN1	SMK-100/CD30GN1	SMK-120/CD30GN1
Power supply		V/Ph/Hz	220-240/1/50			
Type			Heating&Cooling	Heating&Cooling	Heating&Cooling	Heating&Cooling
Function	Space heating	°C	15~55	15~55	15~55	15~55
	Space cooling	°C	7~22	7~22	7~22	7~22
	Sanitary hot water	°C	default 45, 35~60	default 45, 35~60	default 45, 35~60	Default 45, 35~60
Max. current		A	13.5	13.5	13.5	13.5
Noise level		dB(A)	32	32	32	32
Dimension (WxHxD)		mm	500x900x375	500x900x375	500x900x375	500x900x375
Packing (WxHxD)		mm	1,110x610x510	1,110x610x510	1,110x610x510	1,110x610x510
Net/gross weight		kg	60/72	63/75	63/75	63/75
Water pipeline	Water inlet pipe	mm	DN32	DN32	DN32	DN32
	Water outlet pipe	mm	DN32	DN32	DN32	DN32
	Drainage pipe	mm	Φ25	Φ25	Φ25	Φ25
Water pump	Pump head	m	8.5	8.5	8.5	8.5
Electric heater	Size	kW	1.5+1.5	1.5+1.5	1.5+1.5	1.5+1.5
	Quantity		2	2	2	2
Expansion tank volume		L	6	6	6	6
Water side heat exchanger		Type	Tube-in-tube	Tube-in-tube	Tube-in-tube	Tube-in-tube
Controller			KJRH-120A/BT-E	KJRH-120A/BT-E	KJRH-120A/BT-E	KJRH-120A/BT-E

DC Inverter outdoor unit			LRSJF-V60/N1-310	LRSJF-V80/N1-310	LRSJF-V100/N1-610	LRSJF-V120/N1-610
Power supply		V/Ph/Hz	220-240/1/50			
Heating	Capacity	kW	6.0	8.0	10.0	12.0
	COP		4.15	4.08	4.30	4.31
	Ambient temperature	°C	-15~43	-15~43	-15~43	-15~43
Cooling	Capacity	kW	5.5	6.3	8.5	9.0
	EER		2.45	2.23	2.45	2.45
	Ambient temperature	°C	15~43	15~43	15~43	15~43
Max. current		A	14.0	15.0	22.0	23.0
Dimension (WxHxD)		mm	895x862x313	895x862x313	900x1,327x348	900x1,327x348
Packing (WxHxD)		mm	1,025x910x410	1,025x910x410	1,030x1,456x435	1,030x1,456x435
Net/gross weight		kg	66/70	66/67	89/101	89/101
Noise level		dB(A)	58	58	58	58
Compressor	Type		Twin-rotary	Twin-rotary	Twin-rotary	Twin-rotary
Fan motor	Type		AC motor	AC motor	DC motor	DC motor
Air side heat exchanger	Type		Fin-coil	Fin-coil	Fin-coil	Fin-coil
Refrigerant	Type/Quantity	kg	R410A/2.4	R410A/2.4	R410A/2.7	R410A/2.7
	Throttle type		Electric expansion valve			

The testing Condition:

1. Heating: Outdoor temperature 7/6°C(DB/WB), inlet water temperature 30°C, outlet water temperature 35°C.
2. Cooling: Outdoor temperature 35/24°C(DB/WB), inlet water temperature 12°C, outlet water temperature 7°C.
3. The above data test reference EN 14511:2011.
4. The specifications may be changed for product improvement, please refer to the nameplate.

380~415-3Ph-50Hz

Hydraulic indoor unit			SMK-80/CSD80GN1	SMK-120/CSD80GN1	SMK-140/CSD80GN1
Power supply		V/Ph/Hz	380-415/3 / 50		
Type			Heating&Cooling	Heating & Cooling	Heating & Cooling
Function	Space heating	°C	15~55	15~55	15~55
	Space cooling	°C	7~22	7~22	7~22
	Sanitary hot water	°C	default 45, 35~60	default 45, 35~60	default 45, 35~60
Max. current		A	16.0	20.0	20.0
Noise level		dB(A)	32	32	32
Dimension (WxHxD)		mm	500x900x375	500x900x375	500x900x375
Packing (WxHxD)		mm	1,110x610x510	1,110x610x510	1,110x610x510
Net/gross weight		kg	64/77	63/75	63/75
Water pipeline	Water inlet pipe	mm	DN32	DN32	DN32
	Water outlet pipe	mm	DN32	DN32	DN32
	Drainage pipe	mm	Φ25	Φ25	Φ25
Water pump	Pump head	m	8.5	8.5	8.5
Electric heater	Size	kW	3.5+4.0	4.0+4.0	4.0+4.0
	Quantity		2	2	2
Expansion tank volume		L	6	6	6
Water side heat exchanger		Type	Tube-in-tube	Tube-in-tube	Tube-in-tube
Controller			KJRH-120A/BT-E	KJRH-120A/BT-E	KJRH-120A/BT-E

DC Inverter outdoor unit			LRSJF-V80/N1-310-B	LRSJF-V120/SN1-610	LRSJF-V140/SN1-610
Power supply		V/Ph/Hz	380-415/3 / 50		
Heating	Capacity	kW	8.0	12.0	14.0
	COP		4.08	4.17	4.13
	Ambient temperature	°C	-20~43	-20~43	-20~43
Cooling	Capacity	kW	6.3	8.8	8.8
	EER		2.33	2.22	2.28
	Ambient temperature	°C	15~43	15~43	15~43
Max. current		A	16.0	9.0	9.0
Dimension (WxHxD)		mm	895x862x313	900x1,327x348	900x1,327x348
Packing (WxHxD)		mm	1,025x910x410	1,030x1,456x435	1,030x1,456x435
Net/gross weight		kg	63/67	89/101	89/101
Noise level		dB(A)	58	58	58
Compressor	Type		Twin-rotary	Twin-rotary	Twin-rotary
Fan motor	Type		AC motor	DC motor	DC motor
Air side heat exchanger	Type		Fin-coil	Fin-coil	Fin-coil
Refrigerant	Type/Quantity	kg	R410A/2.4	R410A/2.7	R410A/2.7
	Throttle type		Electric expansion valve		

The testing Condition:

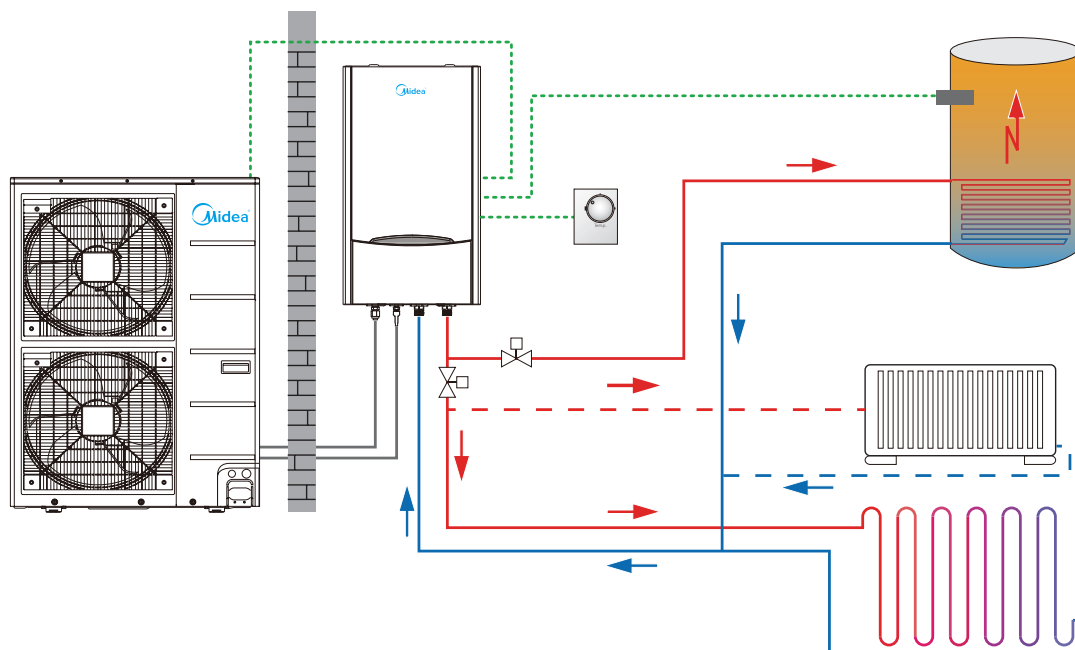
1. Heating: Outdoor temperature 7/6°C(DB/WB), inlet water temperature 30°C, outlet water temperature 35°C.
2. Cooling: Outdoor temperature 35/24°C(DB/WB), inlet water temperature 12°C, outlet water temperature 7°C.
3. The above data test reference EN 14511:2011.
4. The specifications may be changed for product improvement, please refer to the nameplate.

Installation Diagram

❖ M-thermal+ Underfloor Heating(Radiator) + Sanitary Tank

The system can be combined with:

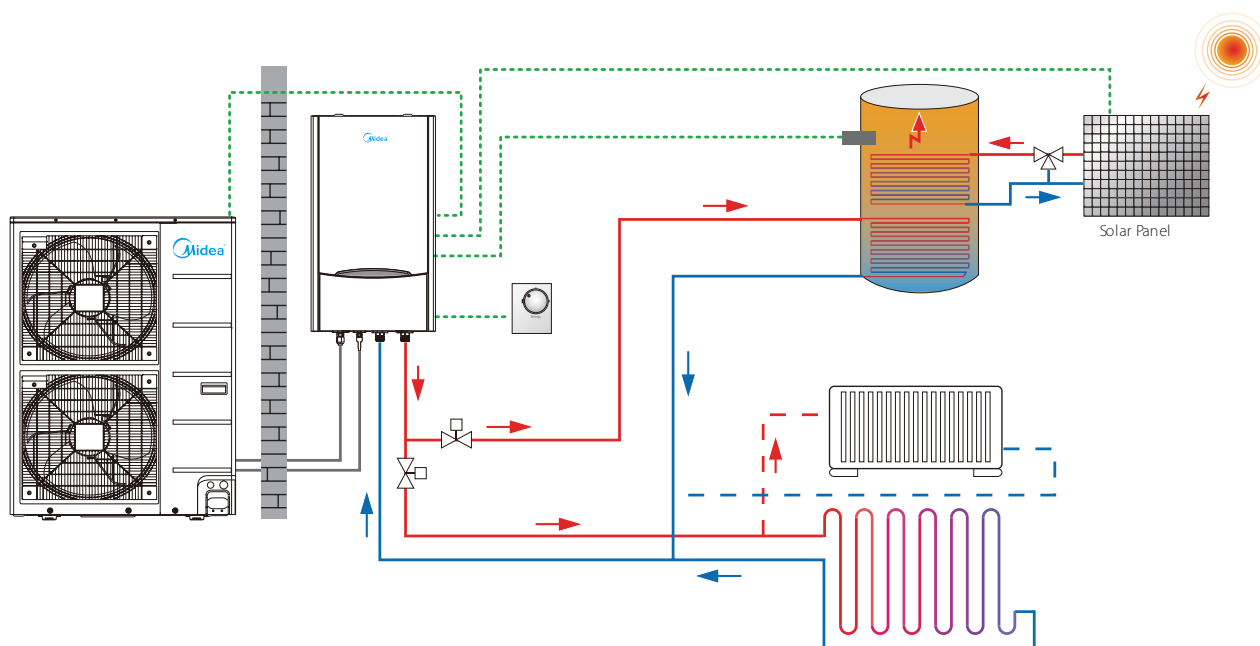
1. Underfloor Heating or Radiator
2. Low temperature radiators to provide the maximize comfort for users.
3. A sanitary hot water tank to supply hot water needs.



❖ M-thermal + Underfloor Heating(Radiator) + Sanitary Tank + Solar Panel

The system can be combined with:

1. Underfloor Heating or Radiator
2. Low temperature radiators to provide the maximize comfort for users.
3. A sanitary hot water tank to supply hot water needs.
4. Solar collectors with optional solar kit, to compliment the production of hot water.

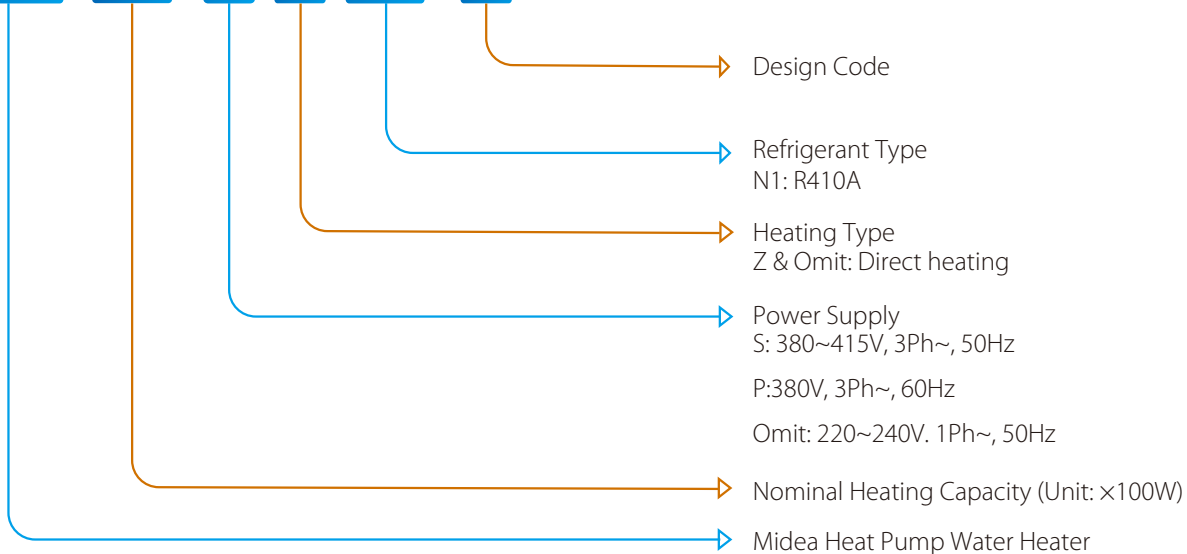


Commercial Applications



Nomenclature

RSJ - 420 / S Z N1 - H





Product lineup

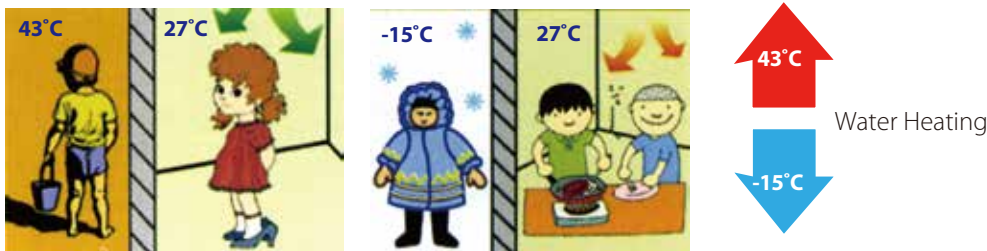
Capacity (kW)	10	20	30	38	42	80	82
Apperance Series							
Direct heating 50Hz	●	●			●	●	
Direct heating 60Hz				●			●
Cycle heating 50Hz			●				

Features

Wide application range >>

- ❖ 7 basic models with heating capacity ranging from 10kW to 820kW.
- ❖ Free modular combination.
- ❖ Wide operation ambient temperature range.

For the direct heating products, the running ambient temperature down to -15°C.



High heating energy efficiency >>

The unit adopts heat pump principle, which absorbs heat from ambient air and releases it to the water to produce hot water.

- ❖ High performance fin-coil type heat exchanger is adopted at air side.



Inner grooved copper tube



Hydrophilic aluminum foil

- ❖ High efficiency tube-in-tube heat exchanger

Inner grooved copper pipe, increase area of heat exchanger, improve efficient.

Anti-corrosion shell increases the useful life of heat exchanger.



Advanced technology >>

- ❖ Unique defrosting flow path.

Air side reserved special defrosting flow path, when the system is defrosting, the four-way valve is reversing, the system will absorb energy from special defrosting flow path, the defrosting progress will have no impact on water temperature.

- ❖ Proprietary gas balance and fluid balance design to ensure the unit operates reliably.
- ❖ Electric water flow valve supplies hot water at a stable temperature and expands the life of compressor.
- ❖ Optimized fan blade edge by CFD programs with analyzing air pressure distribution.
- ❖ Adopt fin-coil exchanger with V or G shape to optimize air flow system of unit.

Wired controller >>

- ❖ Touch key operation.
- ❖ LCD displays operation parameters.
- ❖ Multiple timers.
- ❖ Real-time clock function.
- ❖ Power-off memory function.

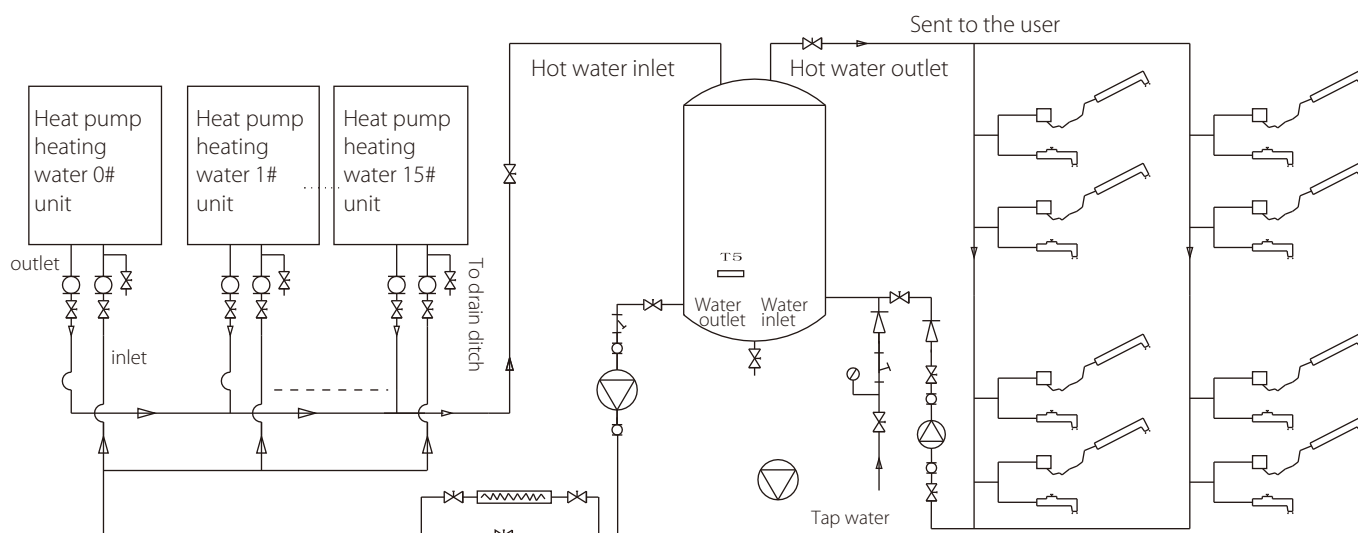
Note: It can be applied to most of the Midea HPWH models by properly setting.



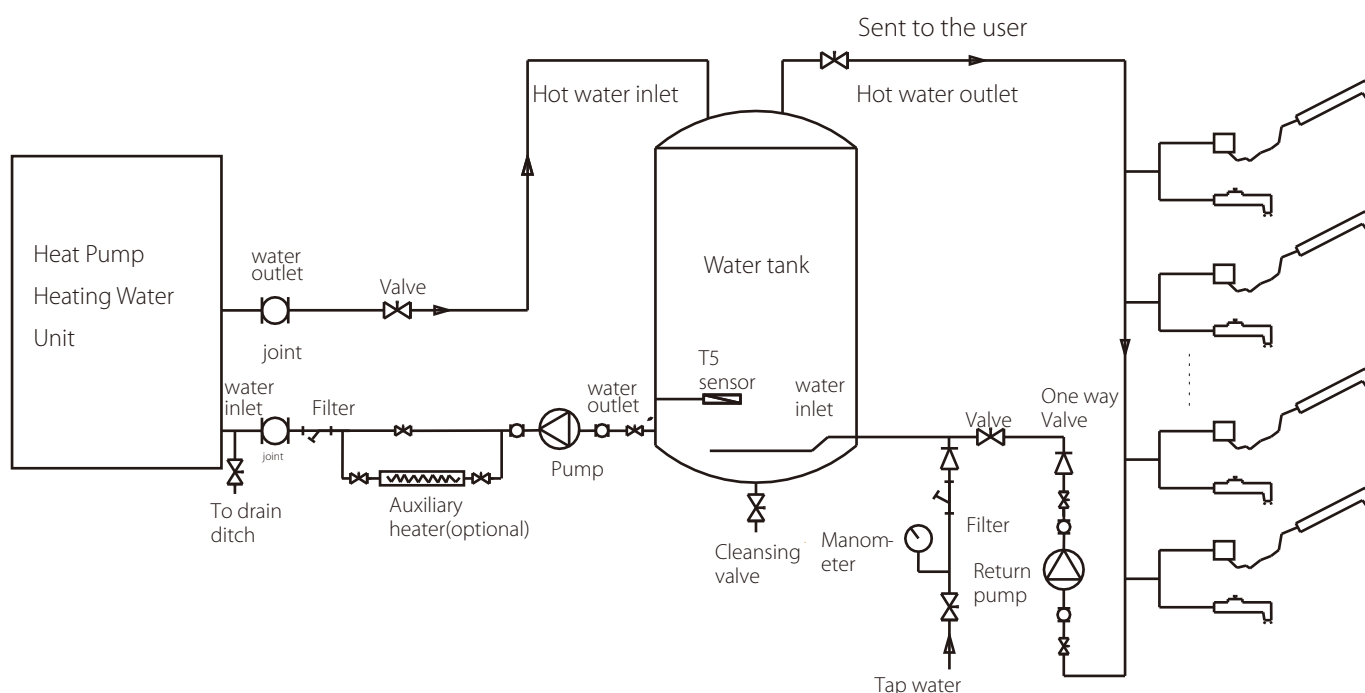
KJR-51/BMKE-A

Simple refrigerating system diagram

Parallel connected heat pump system >>



Single connected heat pump system >>



Specifications

Direct heating 50Hz

Model			RSJ-100/N1-540V-D	RSJ-200/SN1-540V-D
Power supply		V/Ph/Hz	220-240/1/50	380-415/3 / 50
Running ambient temp		°C	-15~43	-15~43
Outwater Temp		°C	Default 56°C, 48°C~60°C	
Water Heating	Capacity	kW	11.2	20.4
	Input	kW	2.98	5.23
	COP		3.76	3.90
	Max. input current	A	17.8	13.0
Unit dimension (WxHxD)		mm	750x1,100x750	750x1,100x750
Packing dimension (WxHxD)		mm	770x1,065x770	770x1,065x770
Net/Gross weight		kg	121/135	148/163
Outdoor noise level		dB(A)	59	63
Max. combination quantity		Pieces	16	16
Compressor	Type		Scroll	Scroll
	Quantity	Pieces	1	1
Fan motor	Type		AC motor	AC motor
	Quantity	Pieces	1	1
Air side heat exchanger		Type	Fin-coil	Fin-coil
Warer side heat exchanger		Type	Tube-in-tube	Tube-in-tube
Refrigerant	Refrigerant Type/Quantity	kg	R410A/1.5	R410A/2.8
	Throttle type		Electric expansion valve	
water pipe	water inlet pipe	mm	DN25	DN25
	water outlet pipe	mm	DN25	DN25
Controller			KJR-51/BMKE-A	KJR-51/BMKE-A
Hot Water Yield		m³/h	0.25	0.45

Model			RSJ-420/SZN1-H	RSJ-800/SZN1-H
Power supply		V/Ph/Hz	380-415/3 / 50	380-415/3 / 50
Running ambient temp		°C	-15~46	-15~46
Outwater Temp		°C	Default 56°C, 48°C~60°C	
Water Heating	Capacity	kW	39.0	80.0
	Input	kW	9.65	20.00
	COP		4.04	4.00
	Max. input current	A	24.0	34.0
Unit dimension (WxHxD)		mm	1,015x1,775x1,026	1,995x1,770x1,025
Packing dimension (WxHxD)		mm	1,070x1,900x1,030	2,080x1,895x1,120
Net/Gross weight		kg	323/343	599/627
Outdoor noise level		dB(A)	66	68
Max. combination quantity		Pieces	4	2
Compressor	Type		Scroll	Scroll
	Quantity	Pieces	1	2
Fan motor	Type		AC motor	AC motor
	Quantity	Pieces	1	2
Air side heat exchanger		Type	Fin-coil	Fin-coil
Warer side heat exchanger		Type	Tube-in-tube	Tube-in-tube
Refrigerant	Refrigerant Type/Quantity	kg	R410A/4.5	R410A/2x4.4
	Throttle type		Electric expansion valve	
water pipe	water inlet pipe	mm	DN32	DN50
	water outlet pipe	mm	DN32	DN50
Controller			KJR-51/BMKE-A	KJR-51/BMKE-A
Hot Water Yield		m³/h	0.85	1.72

Remark:

1. The test conditions: outdoor temperature 20/15°C(DB/WB), inlet water temperature 15°C, outlet water temperature 55°C.
2. The specifications may be changed for product improvement, please refer to the nameplate.

Direct heating 60Hz

Model			RSJ-380/PN1-820	RSJ-820/PZN1-H
Power supply		V/Ph/Hz	380/3 / 60	
Running ambient temp		°C	-15~43	-15~46
Outwater Temp		°C	Default 56°C, 40°C~60°C	
Water Heating	Capacity	kW	42.0	82.5
	Input	kW	10.70	21.10
	COP		3.93	3.91
	Max. input current	A	26.0	47.8
Unit dimension (W×H×D)		mm	997×1,771×894	1,995×1,770×1,025
Packing dimension (W×H×D)		mm	1,100×1,965×920	2,080×1,895×1,120
Net/Gross weight		kg	283 / 310	592/613
Outdoor noise level		dB(A)	65	68
Max. combination quantity		Pieces	4	2
Compressor	Type		Scroll	Scroll
	Quantity	Pieces	1	2
Fan motor	Type		AC motor	AC motor
	Quantity	Pieces	1	2
Air side heat exchanger		Type	Fin-coil	Fin-coil
Warer side heat exchanger		Type	Tube-in-tube	Tube-in-tube
Refrigerant	Refrigerant Type/Quantity	kg	R410A/5.0	R410A/2×4.4
	Throttle type		Electric expansion valve	
water pipe	water inlet pipe	mm	DN25	DN50
	water outlet pipe	mm	DN25	DN50
Controller			KJR-51/BMKE-A	KJR-51/BMKE-A
Hot Water Yield		m³/h	0.89	1.77

Remark:

1. The test conditions: outdoor temperature 20/15°C(DB/WB), inlet water temperature 15°C, outlet water temperature 55°C.
2. The specifications may be changed for product improvement, please refer to the nameplate.

Cycle heating 50Hz

Model			RSJ-300/MSN1-G	
Power supply		V/Ph/Hz	380-415/3 / 50	
Running ambient temp		°C	-10~46	
Outwater Temp		°C	Default 50°C, 20°C~55°C	
Water Heating	Capacity	kW	27.0	
	Input	kW	6.40	
	COP		4.22	
	Max. input current	A	16.5	
Unit dimension (W×H×D)		mm	970×1,565×990	
Packing dimension (W×H×D)		mm	995×1,700×1,010	
Net/Gross weight		kg	249/256	
Outdoor noise level		dB(A)	58	
Max. combination quantity		Pieces	6	
Compressor	Type		Scroll	
	Quantity	Pieces	1	
Fan motor	Type		AC motor	
	Quantity	Pieces	1	
Air side heat exchanger		Type	Fin-coil	
Warer side heat exchanger		Type	Tube-in-tube	
Refrigerant	Refrigerant Type/Quantity	kg	R410A/3.3	
	Throttle type		Electric expansion valve	
water pipe	water inlet pipe	mm	DN32	
	water outlet pipe	mm	DN32	
Controller			KJR-51/BMKE-A	
Hot Water Yield		m³/h	0.58	

Remark:

1. The test conditions: outdoor temperature 20/15°C(DB/WB), initial water temperature 15°C, terminal water temperature 55°C.
2. The specifications may be changed for product improvement, please refer to the nameplate.

Reference projects



Aston Kuta Bali Hotel (Five Star)

Country: Indonesia
City: Bali
Completion Year: 2010



Sheraton Bandara Resort Hotel (Five Star)

Country: Indonesia
City: Jakarta
Completion Year: 2011



Ramada Plaza (Five Star)

Country:	China
City:	Shunde
Completion Year:	2009



Grand Aston Tunjungan (Five Star)

Country:	Indonesia
City:	Surabaya
Completion Year:	2013



The Royale Springhill Residences

Country:	Indonesia
City:	Jakarta
Completion Year:	2010



Agile Estate (Clear Water Bay)

Country: China
City: Sanya
Completion Year: 2011



Shanghai Fudan University (Dormitory Building)

Country: China
City: Shanghai



GD Midea Heating & Ventilating Equipment Co., Ltd.
Is certified under the ISO 14001 International standard
for environmental management.
Certificate No.15912E10020R0L



GD Midea Heating & Ventilating Equipment Co., Ltd.
Certificate of Occupational Health and Safety Management System
Certificate No. 15912S20006R0L-1.



GD Midea Heating & Ventilating Equipment Co., Ltd.
Is certified under the ISO 9001 International standard
for quality assurance.
NO.01 100 019209

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Note: The data in this book may be changed without notice for further improvement
on quality and performance.

Midea CAC After-service Application



iOS Version

Midea CAC News Application



Android Version



iOS Version