

WATER CHILLERS

R-407C / R-134a

[50/60Hz]

- Air Cooled Water Chillers
- Air Cooled Water Chillers
- Heat Pump Type
- Water Cooled Water Chillers



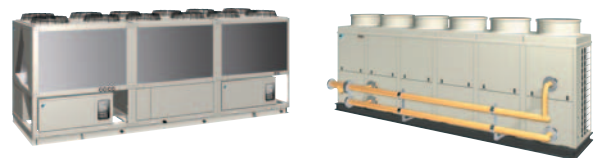
Daikin chilling units employ advanced technology that provides highly accurate temperature control to within $\pm 0.5^{\circ}\text{C}$. They are widely used in applications ranging from air conditioning to industrial equipment. Recent changes have introduced new models with substantially increased capacities of up to 480 HP and various model series, including advanced inverter type units, year-round cooling type units, and units with brine-resistant specifications. By providing a full lineup of heat source series choices, Daikin offers an even more flexible array of solutions for a wide range of heat source applications.

High-performance Daikin Water Chillers are Available in a Broad Range of Models to Suit Diverse Applications.

Air Cooled Water Chillers

R-407C : UWAP Series / UWAXP Series

Dedicated water chillers are able to operate year round because they can accommodate a wide range of outdoor temperatures. The high-performance models with capacities of over 40 HP can deliver between 10%(12%) and 100% of their capacities. They are able to withstand the demanding conditions typical of industrial applications.



Air Cooled Water Chillers - Heat Pump Type

R-407C : UWYP Series

Air cooled heat pump system units are an ideal way to provide a reliable supply of hot and cold water. Of compact size because no cooling tower is required, they are also suitable for office building air conditioning. These high-end models provide an answer to a variety of air conditioning requirements.

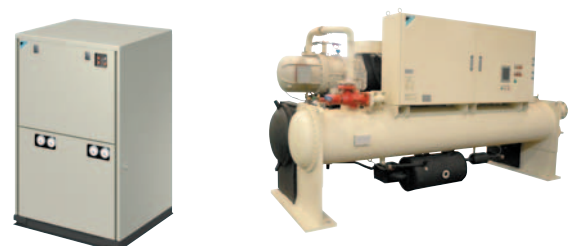


Water Cooled Water Chillers

R-407C : UWP Series

R-134a : ZUW Series

Water cooled units provide a stable supply of chilled water year round and are unaffected by changes in the outdoor temperature. In addition to air conditioning applications, they are also a highly reliable industrial process cooling solution thanks to their stability and wide temperature control range.



List of Daikin Water Chiller Models

50Hz

Capacity Range (kW)

20 40 60 80 100 150 200 250 300 350 450 500 600 700 800 900 1000 1200 1400

Page

Air Cooled Water Chillers

	Standard Unit	6.7~67 ■ UWAP-AY3	106~1260 ■ UWAP-BY1	9 9-10
R-407C	Year - Round Cooling Only Unit		106~1260 ■ UWAP-BY1K	11
	Brine Cooling Unit	68~808 ■ UWAP-BY1Z		12-13
	Inverter Cooling Unit	12.5~75 ■ UWAXP-AY1		14

Air Cooled Water Chillers - Heat Pump Type

R-407C	Standard Unit	11.2~67 ■ UWYP-AY3	106~1260 ■ UWYP-BY1	19 19-20
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Water Cooled Water Chillers

R-407C	Standard Unit	8~80 ■ UWP-AY3		24
R-134a	Standard Unit		367~1450 ■ ZUW-AY1	25
	Brine Cooling Unit	190~715 ■ ZUW-AY1Z		26

60Hz

Capacity Range (kW)

20 40 60 80 100 150 200 250 300 350 450 500 600 700 800 900 1000 1200 1400

Page

Air Cooled Water Chillers

	Standard Unit	7.5~75 ■ UWAP-AY3	118~355 ■ UWAP-BYB	9 10
R-407C	Year - Round Cooling Only Unit		118~355 ■ UWAP-BYBK	12
	Brine Cooling Unit	79~242 ■ UWAP-BYBZ		13

Air Cooled Water Chillers - Heat Pump Type

R-407C	Standard Unit	12.5~75 ■ UWYP-AY3	118~355 ■ UWYP-BYB	19 20
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Water Cooled Water Chillers

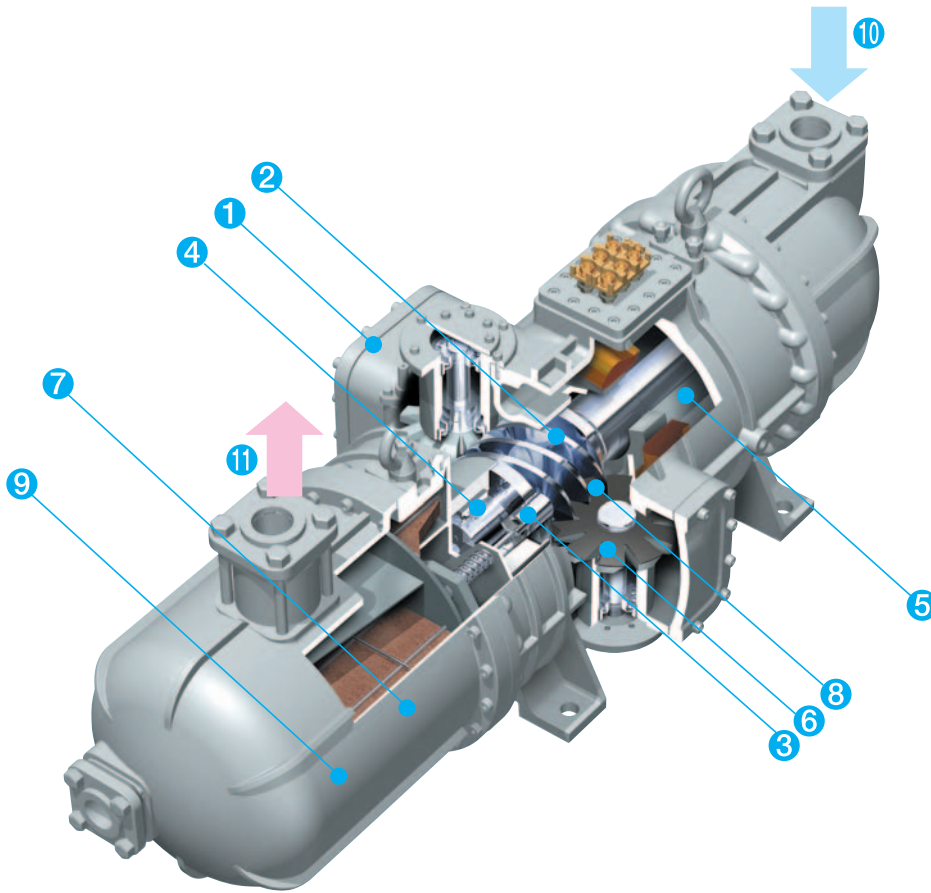
R-407C	Standard Unit	9~90 ■ UWP-AY3		24
R-134a	Standard Unit		441~1040 ■ ZUW-AYB	25
	Brine Cooling Unit	233~555 ■ ZUW-AYBZ		26

Air Cooled Water Chillers

Air Cooled Water Chillers - Heat Pump Type

Water Cooled Water Chillers

Equipped with an Efficient, Durable Semi-hermetically Sealed Screw Compressor.



60,000
Sales volume

- ① Casing
- ② Screw rotor
- ③ Slide valve
- ④ Ball bearing
- ⑤ Motor
- ⑥ Gate rotor
- ⑦ High efficient oil separator
- ⑧ High-low pressure differential lubricating mechanism
- ⑨ Bearing lubricating oil for models using new refrigerant
- ⑩ Refrigerant inlet
- ⑪ Refrigerant outlet

Equipped with a Newly Developed, Highly Efficient Compact Compressor.

Optimisation of the unit enhances efficient operation. A newly developed denture mold enabled the production of a compact model with reduced volume and weight.

High Operational Efficiency Reduces Energy Loss.

In addition to efficient operation afforded by a 12-compression single cycle, the single screw construction eliminates blow-by from high to low pressure sections to reduce energy loss. Daikin water chillers are equipped with a tightly sealed gate rotor to reduce refrigerant loss from leakage. Our compressors are designed for efficient operation in all operating ranges.

High Accuracy and High Durability.

Careful construction features gate rotors positioned to the right and left of the screw to eliminate eccentric load produced by pressure differential. The orthogonal rotor shaft uses high-precision ball and roller bearings, which extends its life compared to conventional types. In addition, power transmission between rotors is reduced, thus eliminating friction wear and maintaining stable operating performance over an extended period of time.

Low Vibration and Sound Levels.

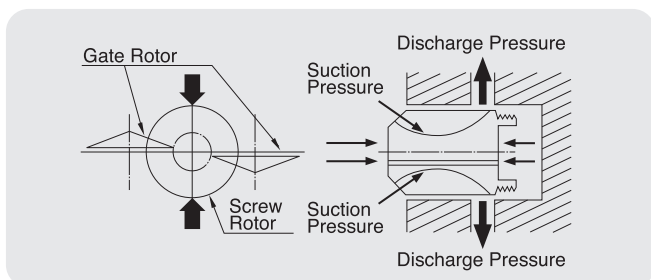
Daikin water chillers use gate rotors made of high-performance engineering plastic for smooth meshing with the screw rotor, thereby reducing shock and vibration, while maintaining stable operation. The gate rotors are well balanced to equalise pressure, which reduces noise and vibration during operation.

Lightweight Compact Design Saves Space.

In addition to the simple single rotor construction, the compact, lightweight design eliminates the need for an oil cooler while incorporating the oil separator into a single part to reduce the space required for setup.

Durable Construction Increases Inspection Intervals thereby Decreasing Maintenance.

Durability of the equipment increases the maintenance interval to approximately 40,000 hours (or about seven years). The simplified lubrication system, including a high/low pressure differential lubrication system and ball and roller bearings, reduces the factors that can contribute to problems. Along with increasing the maintenance and inspection interval, the careful construction of Daikin water chillers enhances reliability.



High Function Microcomputer Control Panel and Multifunctional Remote Controller Realise Efficient Operation Control.

*Applies to all models, with the exception of UWP90 — 900AY3

Microcomputer Control Panel Makes Operation Control Easy.

*For details, refer to the Operation Manual of each model.

Multi-display

Simple key operation displays required operating and settings data. Displays a complete of operating data for easy comprehension.

- Outdoor temp.
- Discharge gas temp.
- Water temp. setting
- Inlet/outlet water temp.
- H/L pressure of refrigerant
- Centralised control
- Malfunction code display

Remote Control by Remote Command

Enables different types of remote control, such as control by commands from the host computer, the Daikin Building Air-Conditioning Control System (D-BACS), or the multifunctional remote controller.

- **On/Off remote control**
- **Remote setting of water temperature**
- **Setting for heat storage operation**
You can switch settings from normal operation to either temperature setting for heat storage or control by the external thermostat.
- **Lower noise operation for during nighttime**
You can reduce the operating noise by stopping half the fan.
Note that the capacity control of the chiller should be limited to less than 70%.
- **Forced fan operation control***
You can force fan operation even when the unit is stopped, which is convenient for removing the snow collected on the fan.
*This function is designed for in areas where snow rarely falls. An optional snow hood should be used in areas prone to snow.
- **Demand control**
(1) You can have Three demand controls are possible thermostat Off, less than 40% or less than 70%. (Factory set:70%)
(2) Demand control may also be achieved by setting the operating current of the compressor.
*Demand control is available on all models, with the exception of those listed below.
UWAP75 — 750AY3, UWAXP125 — 750AY1, UWYP125 — 750AY3, UWP90 — 900AY3

A Multifunctional Liquid Crystal Remote Controller for Effective Group Control.



BRC307 (Option)

Function for Equal Control using Microcomputer Control Panel

Displays operating data for easy comprehension of system status.

- Outdoor temperature
- Inlet/Outlet temperature
- Discharge gas temperature
- High and low pressure
- Water temperature setting
- Malfunction code

Enables different types of remote control.

- On/Off control
- Water temperature setting
- Switching of operating mode
- Defrost cycle setting*
*Applies to heat-pump type only.
- Heat storage operation
- Low noise operation during nighttime
- Forced fan operation
- Demand control*
*Demand control is not available with the UWAP75AY3 — 750AY3.
- Rotation control
- Inspection/Test operation

Controls Multiple Units Effectively

- Up to eight units can be group controlled by a single remote controller.
- Equipped with simultaneous defrost prevention control for avoiding radical water temperature change when operating multiple units.

*Simultaneous defrost can be carried out for up to two units when five or more units are connected.

- **Rotation control**

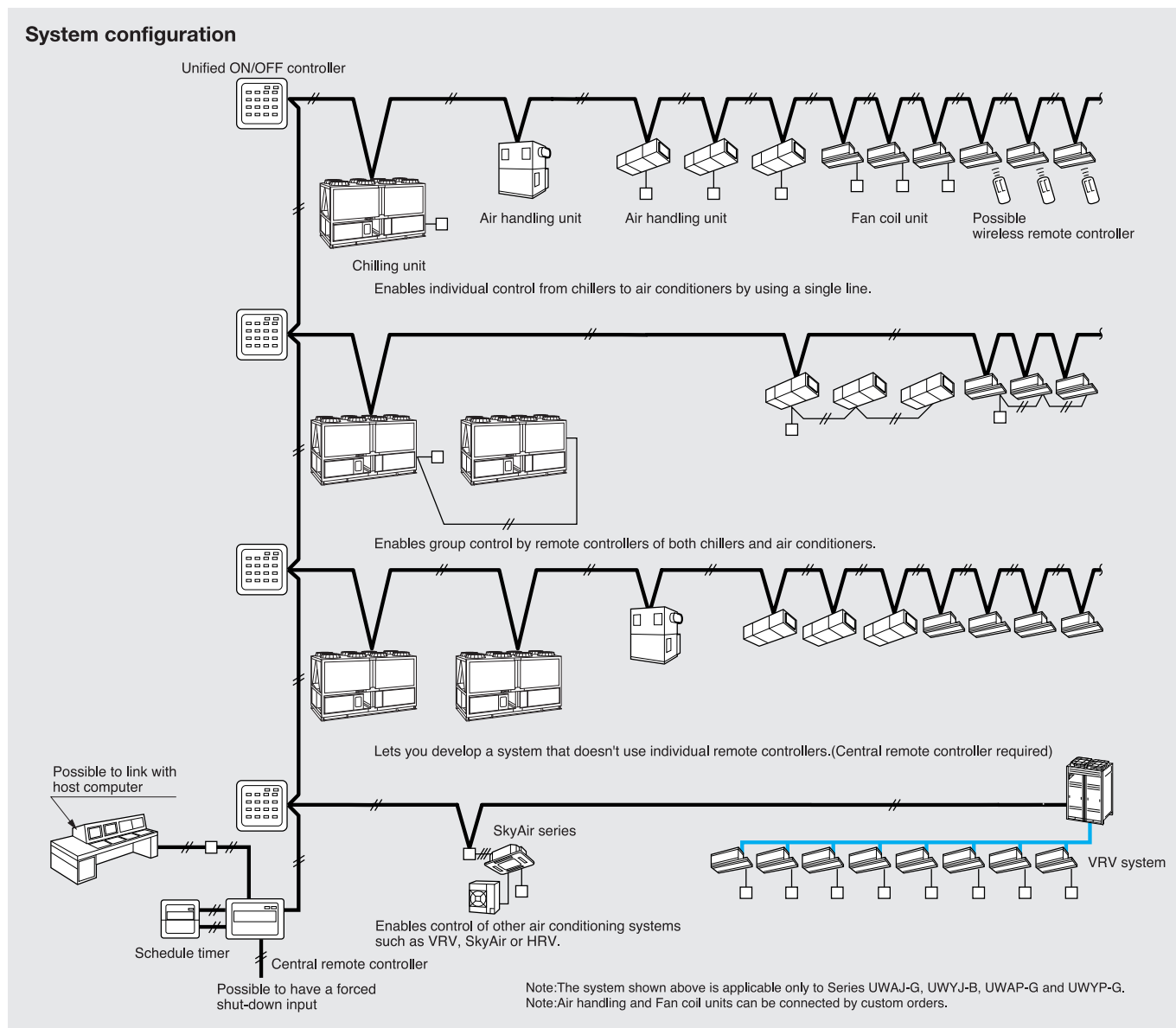
Memorises the number of stops for each unit (therefore not effective for systems in continuous operation), and smooths operation by starting in order from the unit with the least number of starts and stops to increase the life time of all apparatus in the system.

Note : Custom orders may take more time for delivery.

Daikin's Control System for Central Air Conditioning System Offers Appropriate Control for Use and Size of Building.

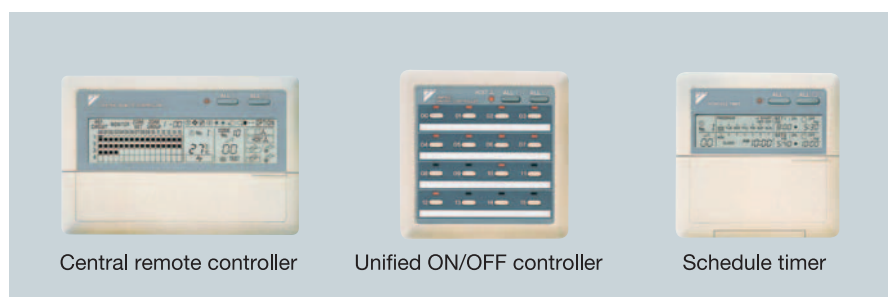
Daikin's Control System for Central Air Conditioning.

Daikin introduces its "Control System for Central Air Conditioning" The system lets you freely combine a number of optional controllers for centralised control to construct the air conditioning control system that is appropriate for your needs. The system executes total central control of chillers and air conditioners, to save management labour while realising ideal central air conditioning performance.



Different Control Apparatus Combinations Enable a Multipurpose System.

Daikin offers a lineup of central controllers equipped with a variety of functions. The unified ON/OFF controller lets you turn equipment on and off individually or in groups. The schedule timer lets you program the time for connected equipment to be turned on and off for each week. Control apparatus with different functions can be freely combined, and up to 64 groups can be centrally controlled. *Number of units that can be connected differs according to the product.

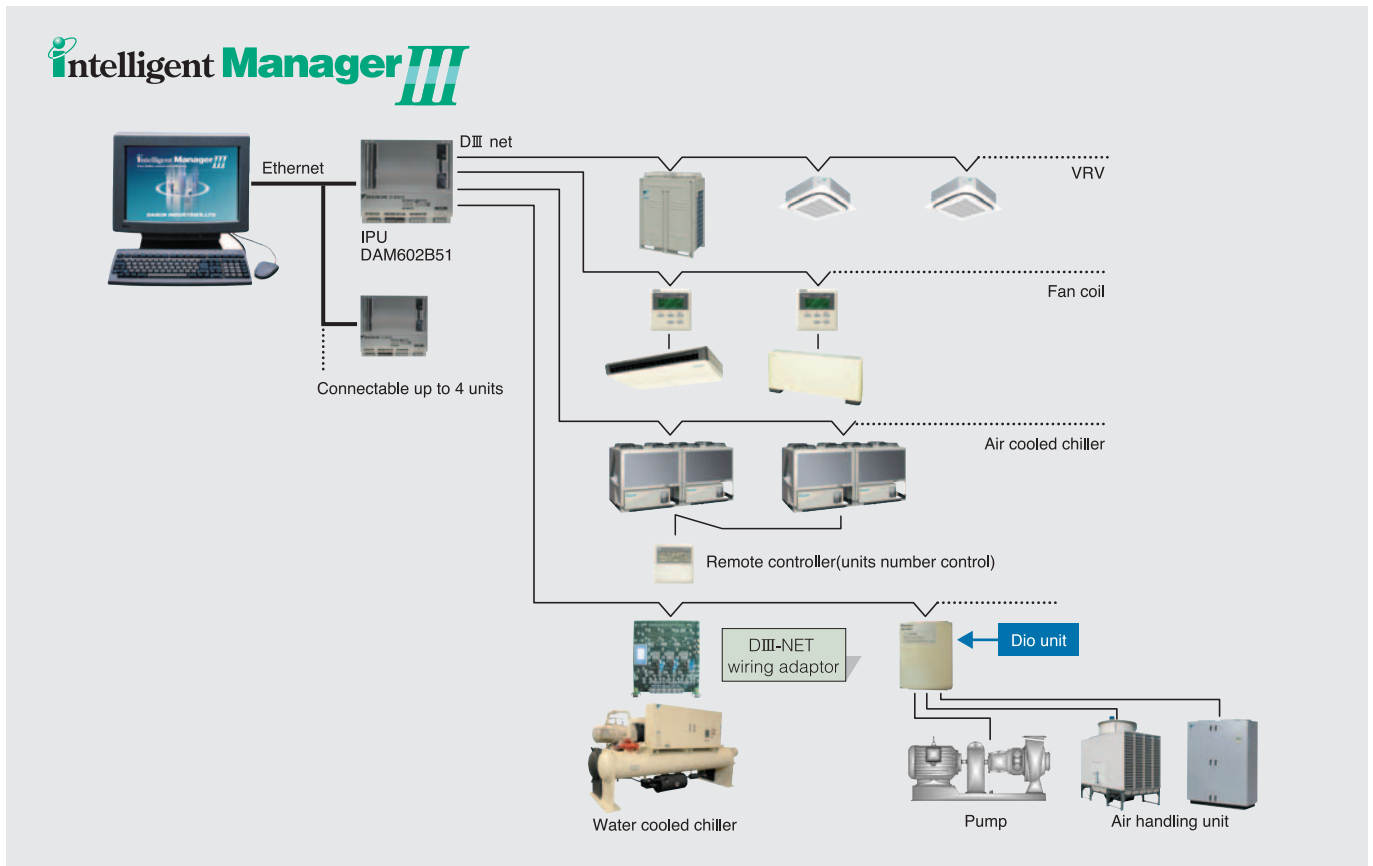


Daikin's Intelligent Control Solution for Air Conditioning System.

Combination of VRV and Applied Systems.

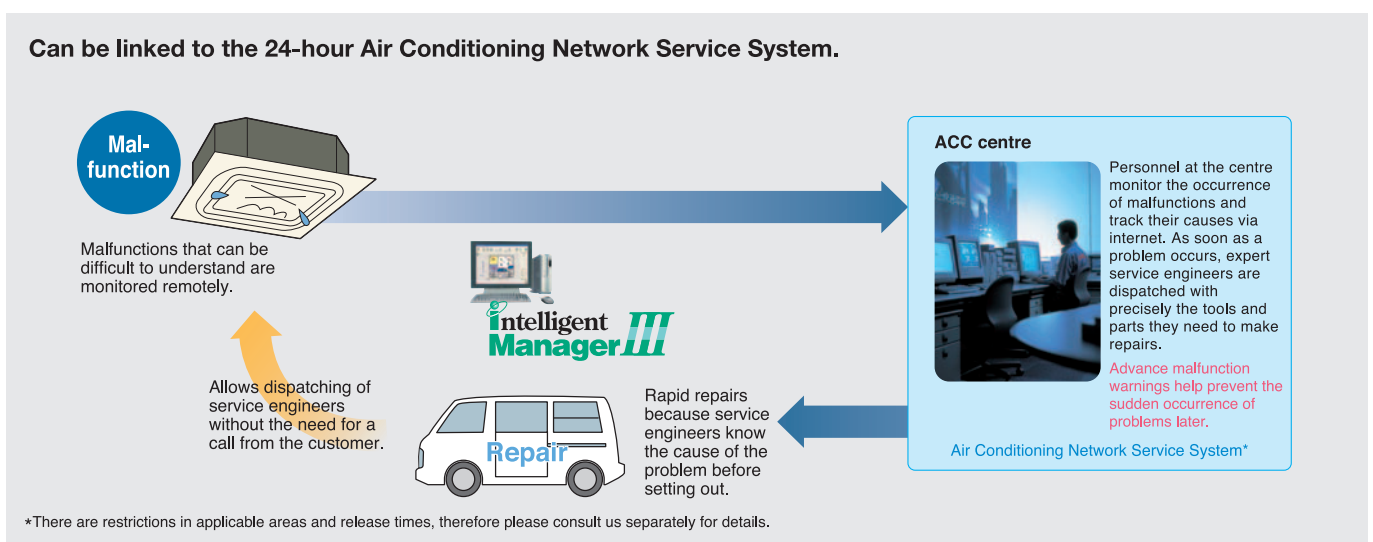
Intelligent Manager III allows you to manage the building which both Daikin VRV and applied systems are installed by integrating the communication method and both systems can work together. This can save wiring and also avoid a miswiring.

★ VRV and chiller DIII lines must be separated from each other.



Air Conditioning Network Service System.

Enhanced convenience through linkage to the Air Conditioning Network Service System.



Air Cooled Water Chillers

R-407C : UWAP Series UWAXP Series



UWAXP750AY1

UWAP120BY1K

UWAP180BY1

* The photo shows the concentrated water pipe kit (a necessary optional accessory) attached to the unit.

Model Lineup

Refrigerant	Units series	Model No.	Capacity (kW)													page	
			6.7/7.5	11.2/12.5	17/19	22.4/25	33.5/37.5	45/50	56/63	67/75	106	132	160	210	265		
50/60Hz	R-407C	Standard Unit	UWAP—AY3*	75	125	190	250	375	500	630	750	—	—	—	—	—	9
50Hz			UWAP—BY1	—	—	—	—	—	—	—	—	40	50	60	80	100	9
60Hz		UWAP—BYB	—	—	—	—	—	—	—	—	40	50	60	—	100	10	
50Hz		Year - Round Cooling Only Unit	UWAP—BY1K	—	—	—	—	—	—	—	—	40	50	60	80	100	11
60Hz			UWAP—BYBK	—	—	—	—	—	—	—	—	40	50	60	—	100	12
50Hz		Brine Cooling Unit	UWAP—BY1Z	—	—	—	—	—	—	—	—	40	50	60	80	100	12
60Hz			UWAP—BYBZ	—	—	—	—	—	—	—	—	40	50	60	—	100	13
50Hz		Inverter Cooling Unit	UWAXP—AY1	—	125	190	250	375	500	630	750	—	—	—	—	—	14

Note: Capacity figures are provided for reference and assume a power supply frequency of 60 Hz.

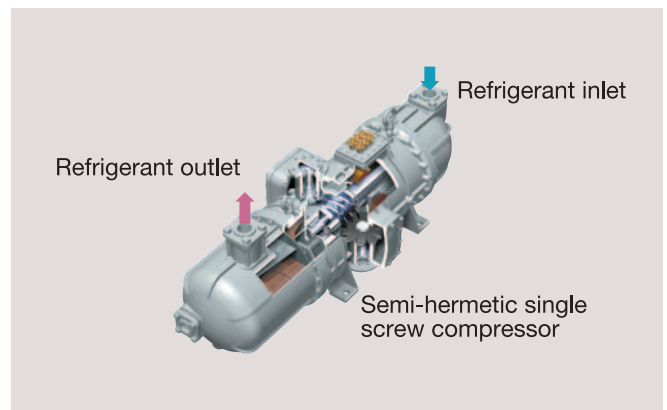
Refrigerant	Units series	Model No.	Capacity (kW)													page	
			320	370	420	480	530	580	630	740	840	960	1060	1160	1260		
50Hz	R-407C	Standard Unit	UWAP—BY1	120	140	160	180	200	220	240	280	320	360	400	440	480	9, 10
60Hz			UWAP—BYB	120	—	—	—	—	—	—	—	—	—	—	—	—	10
50Hz		Year - Round Cooling Only Unit	UWAP—BY1K	120	140	160	180	200	220	240	280	320	360	400	440	480	11
60Hz			UWAP—BYBK	120	—	—	—	—	—	—	—	—	—	—	—	—	12
50Hz		Brine Cooling Unit	UWAP—BY1Z	120	140	160	180	200	220	240	280	320	360	400	440	480	12, 13
60Hz			UWAP—BYBZ	120	—	—	—	—	—	—	—	—	—	—	—	—	13

New Refrigerant

- UWAP75 — 750AY3
- UWAXP125 — 750AY1
- UWAP40 — 480BY1(K)(Z)
- UWAP40 — 120BYB(K)(Z)
- Employs the new refrigerant R-407C.

Efficient and Reliable Compressors

- Applies to All Models
- To improve their operational reliability, 5 – 30HP models employ scroll compressors, while 40 – 480HP models are equipped with semi-hermetic single screw compressors.



Reduced Energy Wastage

- UWAP40 — 160BY1(K)(Z)
- UWAP40 — 120BYB(K)(Z)

• Continuous capacity control with a range from 10% to 100% helps to reduce energy wastage during low-load operation.

High Precision

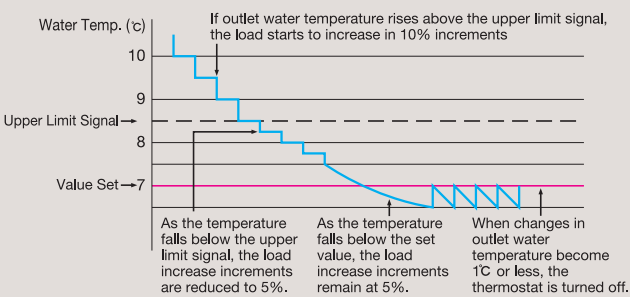
- UWAXP125 — 750AY1

• Inverter control with high load compliance achieves highly accurate outflow water temperature control to within $\pm 0.5^{\circ}\text{C}$.

- UWAP40 — 160BY1(K)(Z)
- UWAP40 — 120BYB(K)(Z)

• The outlet water temperature is precisely controlled to within 0.5°C (with a stable load) through the use of electric expansion valves and continuous capacity control.

• Example of Outlet Water Temperature Control



Note: In systems with one compressor installed and where the load factor is 30% or more, and in systems with two or more compressors installed and where the load factor is 30% or more, control to within $\pm 0.5^{\circ}\text{C}$ is possible.

Wide Water Temperature Control Range

■ Applies to All Models

- The wide water temperature control range provides compatibility with a variety of heat source requirements.
- A variety of brine-resistant specification models are available that provide stable cooling operation at brine outflow temperatures down to -10°C .

Capacity	Water Temperature Control Range
3 — 30 HP	5 to 16°C
	4 to 25°C (Inver Cooling Unit)
40 — 480 HP	4 to 25°C
	-10 to 16°C (Brine Cooling Unit)

Wide Operation Range

■ Applies to All Models

- The wide outdoor air temperature range realises a stable supply of chilled water year round.
- A variety of year-round cooling type models are available that provide stable operation at outdoor temperatures down to -15°C .

Capacity	Outdoor Air Temperature Range where Cooling Possible
3 — 30 HP	-15 to 43°C
	-5 to 43°C
40 — 480 HP	-15 to 43°C (Year-Round Cooling Only Unit)
	0 to 43°C (Brine Cooling Unit)

Multiple Operating Modes

- UWAP40 — 160BY1(K)(Z)
- UWAP40 — 120BYB(K)(Z)

• The user can select to give priority to either precision or reduced power consumption.

High-Precision Mode

Continues operation to levels as low as 10(12)% of total capacity to provide stable water temperature control even during low-load periods.

Low-Power Mode

This mode can be used to reduce power consumption if highly precise water temperature control is not necessary during low-load periods. It shuts down the compressor when the load drops below 40%.

Note: Switching between the above modes is accomplished using a control on the outdoor unit.

■ UWAP40 — 480BY1

• A choice of three control system is available.

Outflow water temperature control

Provides precise control of the water temperature.
(UWAP40 — 160BY1)

Compressor count control

Controls the number of compressors operating depending on the load.
(UWAP40 — 480BY1)

In flow water temperature control

Performs duty cycling control.
(UWAP40 — 480BY1)

Easy Installation

■ UWAXP125 — 750AY1

• High load compliance and highly efficient inverter control provide highly precise adjustment of the water temperature, making it possible to reduce the size of the peripheral equipment.

- UWAP40 — 480BY1(K)(Z)
- UWAP40 — 120AYB
- UWAP40 — 120BYB(K)(Z)

• The compact design of these units significantly reduces the space required for installation.

In the outdoor unit, component parts of a small size have been used wherever possible to reduced its size and correspondingly reduce how much space it requires. Furthermore, replacing the 2-way refrigerant inlets with 4-way inlets has reduced the amount of space the outdoor unit needs even further.

■ UWAP125AY3 — 750AY3

• The horizontal linkup design increases installation flexibility.

This design provides the installation does not protrude so far, making it possible to install water chillers along a wall or under a roof overhang.

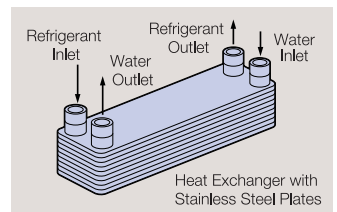
Note: Water supply piping must be purchased separately.
(UWAP375AY3 — 750AY3)

Reliability

■ Applies to All Models

- Stainless steel heat exchanger plates prevent rust, thereby improving their durability and the system's operational reliability.

- UWAP40 — 480BY1(Z)
- UWAP40 — 120BYB(Z)



- Compressor duty cycling control together with emergency operation and power-interruption auto-restart functions provide enhanced air conditioning system reliability.

Air Cooled Water Chillers

50/60Hz
R-407C

Standard Unit
UWAP75 — 750AY3
6.7/7.5 — 67/75kW class



Specifications

Model	UWAP75AY3 (3HP)	UWAP125AY3 (5HP)	UWAP190AY3 (8HP)	UWAP250AY3 (10HP)	UWAP375AY3 (15HP)	UWAP500AY3 (20HP)	UWAP630AY3 (25HP)	UWAP750AY3 (30HP)	
Cooling capacity (50/60 Hz)	kW	6.7/7.5	11.2/12.5	17.0/19.0	22.4/25.0	33.5/37.5	45.0/50.0	67.0/75.0	
	Btu/h	22,900/25,600	38,200/42,700	58,000/64,900	76,500/85,400	114,000/128,000	154,000/171,000	191,000/215,000	
	USRT	1.91/2.13	3.19/3.55	4.83/5.40	6.37/7.11	9.53/10.7	12.8/14.2	15.9/17.9	
Power supply	3 phase, 380/400/415 V, 50 Hz, 400/440 V, 60 Hz, 3 wires system								
Chilled water flow rate (50/60 Hz)	ℓ/min	19/22	32/36	49/54	64/72	96/108	129/143	161/181	
Capacity steps	%	100-0			100-67-34-0	100-50-0	100-80-60-40-20-0	100-67-34-0	
Compressor	Type	Hermetically sealed scroll type							
	Motor output kW	2.2×1	3.75×1	5.5×1	7.5×1	7.5+3.75	7.5×2	7.5×2+3.75	
Evaporator type	Braze plate heat exchanger								
Condenser type	Cross fin coil								
Condenser fan	Type	Propeller							
	Drive	Direct drive							
	Air flow rate (50/60 Hz)	m ³ /min	75/85	90/95	140/160	175/185	265/280	350/370	440/465
	Motor output kW	cfm	2,650/3,000	3,180/3,350	4,940/5,650	6,180/6,530	9,350/9,880	12,400/13,100	15,500/16,400
Refrigerant	R-407C								
Pipe connections water inlet/outlet	1B Flange (JIS10K)(25A)×2		1 1/2B Flange (JIS10K)(40A)×2		1B Flange (JIS10K)(25A)×2+1 1/2B Flange (JIS10K)(40A)×2		1 1/2B Flange (JIS10K)(40A)×4		
Dimensions (H×W×D)	mm	1,450×635 (839)×690		1,450×1,280×690		1,500×1,925×690		1,500×2,570×690	
Weight	kg	136	140	248	260	400	515	680	
Operating weight	kg	138	142	253	264	407	525	695	
Operation range	°C	-15 to 43							

Notes:

*1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95°F) DB.

*2 The following safety devices are equipped as standard. • High pressure switch. • Reverse-phase protector. • Fusible plug. • Freeze up thermostat. • Overcurrent relay for compressor and fan motor. • Overheat protection for discharge gas. • fan thermal protector.

*3 This product is manufactured in Japan.

50Hz
R-407C

Standard Unit
UWAP40 — 180BY1
106 — 480kW class



Specifications

Model	UWAP40BY1 (40HP)	UWAP50BY1 (50HP)	UWAP60BY1 (60HP)	UWAP80BY1 (80HP)	UWAP100BY1 (100HP)	UWAP120BY1 (120HP)	UWAP140BY1 (140HP)	UWAP160BY1 (160HP)	UWAP180BY1 (180HP)	
Cooling capacity	kW	106	132	160	210	265	320	370	480	
	Btu/h	362,000	450,000	546,000	717,000	904,000	1,092,000	1,263,000	1,638,000	
	USRT	30	38	46	60	75	91	105	137	
Power Supply	3 phase, 380/400/415 V, 50 Hz, 3 wires system									
Chilled Water Flow Rate	ℓ/min	304	378	459	602	760	917	1,061	1,376	
Capacity Steps	%	100~10-0								
Compressor	Type	Semi-hermetic sealed single-screw type								
	Motor output kW	30×1	37×1	45×1	60×1	37×2	45×2	45+60	60×2	
Evaporator type	Braze Plate type									
Condenser type	Cross fin coil									
Condenser fan	Type	Propeller								
	Drive	Direct drive								
	Air flow rate (50/60 Hz)	m ³ /min	780	860	1,290	1,600	1,720	2,150	2,580	
	Motor output kW	cfm	27,534	30,358	45,537	56,480	60,716	75,895	91,074	
Refrigerant	R-407C									
Pipe connections water inlet/outlet	3B Flange (80A HG20593-97)				4B Flange (100A HG20593-97)				5B Flange (125A HG20593-97)	
Pipe connections drainage pipe outlet	RP1 1/4 Female screw (32A)									
Dimensions (H×W×D)	mm	2,456×2,200×2,000			2,456×2,650×2,000		2,456×4,400×2,000		2,456×4,850×2,000	
Weight	kg	1,690	1,810	1,870	2,375	3,500	3,605	4,125	4,590	
Operation weight	kg	1,723	1,846	1,910	2,422	3,551	3,662	4,196	4,661	
Operation range	°C	-5 to 43								

Notes:

*1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95°F) DB.

*2 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.

*3 The unit is equipped with standard water filter.

*4 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required.

*5 This product is manufactured in China.

50Hz
R-407C

Standard Unit
UWAP200 — 480BY1
530 — 1,260kW class



Air Cooled Water Chillers

■ Specifications

Model		UWAP200BY1 (200HP)	UWAP220BY1 (220HP)	UWAP240BY1 (240HP)	UWAP280BY1 (280HP)	UWAP320BY1 (320HP)	UWAP360BY1 (360HP)	UWAP400BY1 (400HP)	UWAP440BY1 (440HP)	UWAP480BY1 (480HP)
Cooling capacity	kW	530	580	630	740	840	960	1,060	1,160	1,260
	Btu/h	1,809,000	1,979,000	2,150,000	2,525,000	2,867,000	3,276,000	3,617,000	3,959,000	4,300,000
	USRT	151	165	179	210	239	273	301	330	358
Power Supply		3 phase, 380/400/415 V, 50 Hz, 3 wires system								
Chilled Water Flow Rate	ℓ/min	1,519	1,663	1,806	2,121	2,408	2,752	3,039	3,325	3,612
Capacity Steps	%	100~10-0								
Compressor	Type	Semi-hermetic sealed single-screw type								
	Motor output	kW	45×2+60	45+60×2	60×3	(45+60)×2	(60×2)×2	(45×3)×2	(45×2+60)×2	(45+60×2)×2
Evaporator type		Brazeing Plate type								
Condenser type		Cross fin coil								
Condenser fan	Type	Propeller								
	Drive	Direct drive								
	Air flow rate	m ³ /min	3,010	3,440	3,870	4,300	5,160	6,020	6,880	7,740
		cfm	106,253	121,432	136,611	151,790	182,148	212,506	242,864	273,222
Motor output	kW	1.0×14	1.0×16	1.0×18	(1.0×10)×2	(1.0×12)×2	(1.0×14)×2	(1.0×16)×2	(1.0×18)×2	
Refrigerant		R-407C								
Pipe connections water inlet/outlet		5B Flange (125A HG20593-97)			4B Flange (100A HG20593-97)		5B Flange (125A HG20593-97)			
Pipe connections drainage pipe outlet		RP1 1/4 Female screw (32A)								
Dimensions (H×W×D)	mm	2,456×7,050 ×2,000	2,456×7,500 ×2,000	2,456×7,950 ×2,000	(2,456×4,850 ×2,000)×2	(2,456×5,300 ×2,000)×2	(2,456×6,600 ×2,000)×2	(2,456×7,050 ×2,000)×2	(2,456×7,500 ×2,000)×2	(2,456×7,950 ×2,000)×2
Weight	kg	6,000	6,500	7,005	4,125×2	4,590×2	5,500×2	6,000×2	6,500×2	7,005×2
Operation weight	kg	6,198	6,719	7,245	4,196×2	4,661×2	5,691×2	6,198×2	6,719×2	7,245×2
Operation range	°C	-5 to 43								

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95°F) FDB).
- *2 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
- *3 The unit is equipped with standard water filter.
- *4 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required.
- *5 This product is manufactured in China.

60Hz
R-407C

Standard Unit
UWAP40 — 120BYB
118 — 355kW class



■ Specifications

Model		UWAP40BYB (40HP)	UWAP50BYB (50HP)	UWAP60BYB (60HP)	UWAP100BYB (100HP)	UWAP120BYB (120HP)	
Cooling capacity	kW	118	150	180	300	355	
	Btu/h	403,000	512,000	614,000	1,024,000	1,212,000	
	USRT	34	43	51	85	101	
Power supply		3 phase, 400/440 V, 60 Hz, 3 wires system					
Chilled water flow rate	ℓ/min	338	430	516	860	1,018	
Capacity steps	%	100~10-0					
Compressor	Type	Semi-hermetic sealed single-screw type					
	Motor output	kW	30×1	37×1	45×1	37×2	45×2
Evaporator type		Brazeing Plate type					
Condenser type		Cross fin coil					
Condenser fan	Type	Propeller					
	Drive	Direct drive					
	Air flow rate	m ³ /min	810	1,010		2,020	
		cfm	28,593	35,653		71,306	
Motor output	kW	0.5×4	1.0×4		1.0×8		
Refrigerant		R-407C					
Pipe connections water inlet/outlet		3B Flange (80A HG20593-97)			4B Flange (100A HG20593-97)		
Pipe connections drainage pipe outlet		RP1 1/4 Female screw (32A)					
Dimensions (H×W×D)	mm	2,456×2,200×2,000			2,456×4,400×2,000		
Weight	kg	1,690	1,810	1,870	3,500	3,605	
Operating weight	kg	1,723	1,846	1,910	3,551	3,662	
Operation range	°C	-5 to 43					

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95°F) FDB).
- *2 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
- *3 The unit is equipped with standard water filter.
- *4 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required.
- *5 This product is manufactured in China.

Air Cooled Water Chillers

50Hz
R-407C

Year - Round Cooling Only Unit
UWAP40 — 180BY1K
106 — 480kW class



Specifications

Model	UWAP40BY1K (40HP)	UWAP50BY1K (50HP)	UWAP60BY1K (60HP)	UWAP80BY1K (80HP)	UWAP100BY1K (100HP)	UWAP120BY1K (120HP)	UWAP140BY1K (140HP)	UWAP160BY1K (160HP)	UWAP180BY1K (180HP)	
Cooling capacity *1	kW	106	132	160	210	265	320	370	420	480
	Btu/h	362,000	450,000	546,000	717,000	904,000	1,092,000	1,263,000	1,433,000	1,638,000
	USRT	30	38	46	60	75	91	105	119	137
Power supply	3 phase, 380/400/415 V, 50 Hz, 3 wires system									
Chilled water flow rate	l/min	304	378	459	602	760	917	1,061	1,204	1,376
Capacity steps	%	100~10-0								
Compressor	Type	Semi-hermetic sealed single-screw type								
	Motor output	kW	30×1	37×1	45×1	60×1	37×2	45×2	45+60	60×2
Evaporator type	Brazeing Plate type									
Condenser type	Cross fin coil									
Condenser fan	Type	Propeller								
	Drive	Direct drive								
	Air flow rate	m ³ /min	780	860		1,290	1,600	1,720	2,150	2,580
		cfm	27,534	30,358		45,537	56,480	60,716	75,895	91,074
Motor output	kW	0.5×4	1.0×4		1.0×6	1.0×8		1.0×10	1.0×12	
Refrigerant	R-407C									
Pipe connections water inlet/outlet	3B Flange (80A HG20593-97)				4B Flange (100A HG20593-97)				5B Flange (125A HG20593-97)	
Pipe connections drainage pipe outlet	RP1 1/4 Female screw (32A)									
Dimensions (H×W×D)	mm	2,456×2,200×2,000			2,456×2,650×2,000	2,456×4,400×2,000		2,456×4,850×2,000	2,456×5,300×2,000	2,456×6,600×2,000
Weight	kg	1,715	1,835	1,895	2,410	3,550	3,655	4,185	4,660	5,575
Operating weight	kg	1,748	1,871	1,935	2,457	3,601	3,712	4,256	4,731	5,766
Operation range	°C	-15 to 43								

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95°F)DB.
 *2 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
 *3 The unit is equipped with standard water filter.
 *4 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required.
 *5 This product is manufactured in China.

50Hz
R-407C

Year - Round Cooling Only Unit
UWAP200 — 480BY1K
530 — 1,260kW class



Specifications

Model	UWAP200BY1K (200HP)	UWAP220BY1K (220HP)	UWAP240BY1K (240HP)	UWAP280BY1K (280HP)	UWAP320BY1K (320HP)	UWAP360BY1K (360HP)	UWAP400BY1K (400HP)	UWAP440BY1K (440HP)	UWAP480BY1K (480HP)		
Cooling capacity *1	kW	530	580	630	740	840	960	1,060	1,160	1,260	
	Btu/h	1,809,000	1,979,000	2,150,000	2,525,000	2,867,000	3,276,000	3,617,000	3,959,000	4,300,000	
	USRT	151	165	179	210	239	273	301	330	358	
Power supply	3 phase, 380/400/415 V, 50 Hz, 3 wires system										
Chilled water flow rate	l/min	1,519	1,663	1,806	2,121	2,408	2,752	3,039	3,325	3,612	
Capacity steps	%	100~10-0									
Compressor	Type	Semi-hermetic sealed single-screw type									
	Motor output	kW	40×2+60	45+60×2	60×3	(45+60)×2	(60×2)×2	(45×3)×2	(45×2+60)×2	(45+60×2)×2	(60×3)×2
Evaporator type	Brazeing Plate type										
Condenser type	Cross fin coil										
Condenser fan	Type	Propeller									
	Drive	Direct drive									
	Air flow rate	m ³ /min	3,010	3,440	3,870	4,300	5,160		6,020	6,880	7,740
		cfm	106,253	121,432	136,611	151,790	182,148		212,506	242,864	273,222
Motor output	kW	1.0×14	1.0×16	1.0×18	(1.0×10)×2	(1.0×12)×2		(1.0×14)×2	(1.0×16)×2	(1.0×18)×2	
Refrigerant	R-407C										
Pipe connections water inlet/outlet	5B Flange (125A HG20593-97)			4B Flange (100A HG20593-97)			5B Flange (125A HG20593-97)				
Pipe connections drainage pipe outlet	RP1 1/4 Female screw (32A)										
Dimensions (H×W×D)	mm	2,456×7,050×2,000	2,456×7,500×2,000	2,456×7,950×2,000	(2,450×4,850×2,000)×2	(2,456×5,300×2,000)×2	(2,456×6,600×2,000)×2	(2,456×7,050×2,000)×2	(2,456×7,500×2,000)×2	(2,456×7,950×2,000)×2	
Weight	kg	6,085	6,595	7,110	4,185×2	4,660×2	5,575×2	6,085×2	6,595×2	7,110×2	
Operating weight	kg	6,283	6,814	7,350	4,256×2	4,731×2	5,766×2	6,283×2	6,814×2	7,350×2	
Operation range	°C	-15 to 43									

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95°F)DB.
 *2 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
 *3 The unit is equipped with standard water filter.
 *4 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required.
 *5 This product is manufactured in China.

60Hz
R-407C

Year - Round Cooling Only Unit
UWAP40 — 120BYBK
118 — 355kW class



■ Specifications

Model		UWAP40BYBK (40HP)	UWAP50BYBK (50HP)	UWAP60BYBK (60HP)	UWAP100BYBK (100HP)	UWAP120BYBK (120HP)	
Cooling capacity *1	kW	118	150	180	300	355	
	Btu/h	403,000	512,000	614,000	1,024,000	1,212,000	
	USRT	34	43	51	85	101	
Power supply		3 phase, 400/440 V, 60 Hz, 3 wires system					
Chilled water flow rate		338	430	516	860	1,018	
Capacity steps		100~10-0					
Compressor	Type	Semi-hermetic sealed single-screw type					
	Motor output kW	30×1	37×1	45×1	37×2	45×2	
Evaporator type		Brazeing Plate type					
Condenser type		Cross fin coil					
Condenser fan	Type	Propeller					
	Drive	Direct drive					
	Air flow rate	m ³ /min	810	1,010		2,020	
		cfm	28,593	35,653		71,306	
Motor output kW	0.5×4	1.0×4		1.0×8			
Refrigerant		R-407C					
Pipe connections water inlet/outlet		3B Flange (80A HG20593-97)			4B Flange (100A HG20593-97)		
Pipe connections drainage pipe outlet		RP1 1/4 Female screw (32A)					
Dimensions (H×W×D)		mm 2,456×2,200×2,000			2,456×4,400×2,000		
Weight		kg 1,715	1,835	1,895	3,550	3,655	
Operating weight		kg 1,748	1,871	1,935	3,601	3,712	
Operation range		°C -15 to 43					

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95°FDB).
 *2 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector.
 • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
 *3 The unit is equipped with standard water filter.
 *4 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required.
 *5 This product is manufactured in China.

50Hz
R-407C

Brine Cooling Unit
UWAP40 — 180BY1Z
68 — 303kW class



■ Specifications

Model		UWAP40BY1Z (40HP)	UWAP50BY1Z (50HP)	UWAP60BY1Z (60HP)	UWAP80BY1Z (80HP)	UWAP100BY1Z (100HP)	UWAP120BY1Z (120HP)	UWAP140BY1Z (140HP)	UWAP160BY1Z (160HP)	UWAP180BY1Z (180HP)	
Cooling capacity	kW	68	83	101	135	166	205	236	269	303	
	Btu/h	232,000	283,000	345,000	460,000	567,000	700,000	804,000	918,000	1,034,000	
	USRT	19	24	29	38	47	58	67	77	86	
Power supply		3 phase, 380/400/415 V, 50 Hz, 3 wires system									
Brine flow rate		428	522	635	848	1,044	1,290	1,483	1,693	1,906	
Capacity steps		100~10-0									
Compressor	Type	Semi-hermetic sealed single-screw type									
	Motor output kW	30×1	37×1	45×1	60×1	37×2	45×2	45+60	60×2	45×3	
Evaporator type		Brazeing Plate type									
Condenser type		Cross fin coil									
Condenser fan	Type	Propeller									
	Drive	Direct drive									
	Air flow rate	m ³ /min	780	860		1,290	1,600	1,720	2,150	2,580	
		cfm	27,534	30,358		45,537	56,480	60,716	75,895	91,074	
Motor output kW	0.5×4	1.0×4		1.0×6	1.0×8		1.0×10	1.0×12			
Refrigerant		R-407C									
Pipe connections water inlet/outlet		3B Flange (80A HG20593-97)				4B Flange (100A HG20593-97)				5B Flange (125A HG20593-97)	
Pipe connections drainage pipe outlet		RP1 1/4 Female screw (32A)									
Dimensions (H×W×D)		mm 2,456×2,200×2,000			2,456×2,650×2,000		2,456×4,400×2,000		2,456×4,850×2,000		2,456×5,300×2,000
Weight		kg 1,690	1,810	1,870	2,375	3,500	3,605	4,125	4,590	5,500	
Operating weight		kg 1,723	1,846	1,910	2,422	3,551	3,662	4,196	4,661	5,691	
Operation range		°C ambient temp. 0 to 43, Brine temp. -10 to 16									

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving brine temp.-5°C (23.0°F), entering brine temp.-2°C (28.4°F), and outdoor air temp. 35°C DB(95°FDB).
 *2 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector.
 • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
 *3 The unit is equipped with standard water filter.
 *4 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required.
 *5 This product is manufactured in China.

Air Cooled Water Chillers

50Hz
R-407C

Brine Cooling Unit UWAP200 — 480BY1Z 337 — 808kW class



Specifications

Model	UWAP200BY1Z (200HP)	UWAP220BY1Z (220HP)	UWAP240BY1Z (240HP)	UWAP280BY1Z (280HP)	UWAP320BY1Z (320HP)	UWAP360BY1Z (360HP)	UWAP400BY1Z (400HP)	UWAP440BY1Z (440HP)	UWAP480BY1Z (480HP)	
Cooling capacity	kW	337	370	404	472	538	606	674	808	
	Btu/h	1,149,000	1,263,000	1,379,000	1,611,000	1,836,000	2,068,000	2,300,000	2,757,000	
	USRT	96	105	115	134	153	172	192	230	
Power supply	3 phase, 380/400/415 V, 50 Hz, 4 wires system									
Brine flow rate	l/min	2,119	2,328	2,542	2,970	3,385	3,813	4,241	4,656	
Capacity steps	%	100~10-0								
Compressor	Type	Semi-hermetic sealed single-screw type								
	Motor output	kW	45×2+60	45+60×2	60×3	(45+60)×2	(60×2)×2	(45×3)×2	(45×2+60)×2	(45+60×2)×2
Evaporator type	Braze Plate type									
Condenser type	Cross fin coil									
Condenser Fans	Type	Propeller								
	Drive	Direct drive								
	Air flow rate	m ³ /min	3,010	3,440	3,870	4,300	5,160	6,020	6,880	7,740
	cfm	106,253	121,432	136,611	151,790	182,148	212,506	242,864	273,222	
	Motor output	kW	1.0×14	1.0×16	1.0×18	(1.0×10)×2	(1.0×12)×2	(1.0×14)×2	(1.0×16)×2	(1.0×18)×2
Refrigerant	R-407C									
Pipe connections water inlet/outlet	5B Flange (125A HG20593-97)			4B Flange (100A HG20593-97)		5B Flange (125A HG20593-97)				
Pipe connections drainage pipe outlet	RP1 1/4 Female screw (32A)									
Dimensions (H×W×D)	mm	2,456×7,050 ×2,000	2,456×7,500 ×2,000	2,456×7,950 ×2,000	(2,456×4,850 ×2,000)×2	(2,456×5,300 ×2,000)×2	(2,456×6,600 ×2,000)×2	(2,456×7,050 ×2,000)×2	(2,456×7,500 ×2,000)×2	(2,456×7,950 ×2,000)×2
Weight	kg	6,000	6,500	7,005	4,125×2	4,590×2	5,500×2	6,000×2	6,500×2	7,005×2
Operating weight	kg	6,198	6,719	7,245	4,196×2	4,661×2	5,691×2	6,198×2	6,719×2	7,245×2
Operation range	°C	ambient temp. 0 to 43, Brine temp. -10 to 16								

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving brine temp.-5°C (23.0°F), entering brine temp.-2°C (28.4°F), and outdoor air temp. 35°C DB(95°F FDB).
- *2 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
- *3 The unit is equipped with standard water filter.
- *4 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required.
- *5 This product is manufactured in China.

60Hz
R-407C

Brine Cooling Unit UWAP40 — 120BYBZ 79 — 242kW class



Specifications

Model	UWAP40BYBZ (40HP)	UWAP50BYBZ (50HP)	UWAP60BYBZ (60HP)	UWAP100BYBZ (100HP)	UWAP120BYBZ (120HP)	
Cooling capacity	kW	79	94	121	188	
	Btu/h	270,000	321,000	413,000	642,000	
	USRT	22	27	34	53	
Power supply	3 phase, 400/440 V, 60 Hz, 3 wires system					
Brine flow rate	l/min	497	591	761	1,183	
Capacity steps	%	100~10-0				
Compressor	Type	Semi-hermetic sealed single-screw type				
	Motor output	kW	30×1	37×1	45×1	37×2
Evaporator type	Braze Plate type					
Condenser type	Cross fin coil					
Condenser Fans	Type	Propeller				
	Drive	Direct drive				
	Air flow rate	m ³ /min	810	1,010	2,020	2,020
	cfm	28,593	35,653	71,306	71,306	
	Motor output	kW	0.5×4	1.0×4	1.0×8	1.0×8
Refrigerant	R-407C					
Pipe connections water inlet/outlet	3B Flange (80A HG20593-97)			4B Flange (100A HG20593-97)		
Pipe connections drainage pipe outlet	RP1 1/4 Female screw (32A)					
Dimensions (H×W×D)	mm	2,456×2,200×2,000			2,456×4,400×2,000	
Weight	kg	1,690	1,810	1,870	3,500	3,605
Operating weight	kg	1,723	1,846	1,910	3,551	3,662
Operation range	°C	ambient temp. 0 to 43, Brine temp. -10 to 16				

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving brine temp.-5°C (23.0°F), entering brine temp.-2°C (28.4°F), and outdoor air temp. 35°C DB(95°F FDB).
- *2 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
- *3 The unit is equipped with standard water filter.
- *4 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required.
- *5 This product is manufactured in China.

50Hz
R-407C

Inverter Cooling Unit
UWAXP125 — 750AY1
12.5 — 75kW class



■ Specifications

Model		UWAXP125AY1 (5HP)	UWAXP190AY1 (8HP)	UWAXP250AY1 (10HP)	UWAXP375AY1 (15HP)	UWAXP500AY1 (20HP)	UWAXP630AY1 (25HP)	UWAXP750AY1 (30HP)	
Cooling capacity *1	kW	12.5	19.0	25.0	37.5	50.0	63.0	75.0	
	Btu/h	42,700	64,900	85,400	128,000	171,000	215,000	256,000	
	USRT	3.55	5.40	7.11	10.7	14.2	17.9	21.3	
Power supply	3 phase, 380/400/415 V, 50 Hz, 4 wires system								
Chilled water flow rate	ℓ/min	36	54	72	108	143	181	215	
Capacity steps	%	100~35	100~20						
Compressor	Type	Hermetically sealed scroll type							
	Motor output kW	3.5×1	(3.5+2.2)×1	(3.5+3.75)×1	(5.5+5.5)×1	(5.5+7.5)×1	(3.5+3.75)+(5.5+5.5)	(3.5+3.75)+(5.5+7.5)	
Evaporator type	Braze plate heat exchangers								
Condenser type	Cross fin coil								
Condenser fan	Type	Propeller							
	Drive	Direct drive (Inverter system)							
	Air flow rate	m ³ /min	80	150	170	265	340	170+265	170+340
	cfm	3,180	4,940	6,180	9,350	12,400	6,180+9,350	6,180+12,400	
	Motor output kW	0.20×1	(0.23+0.14)×1	(0.23+0.18)×1	0.20+0.23×2	(0.14+0.23)×2	(0.20+0.18)+0.23×3	(0.20+0.18)+(0.14×2+0.20×2)	
Refrigerant	R-407C								
Pipe connections water inlet/outlet		1B Flange (JIS10K)(25A)	1 1/2B Flange (JIS10K)(40A)		2B Flange (JIS10K)(50A)		Main body : 1 1/2B Flange (JIS10K)(40A)×2 +2B Flange (JIS10K)(50A)×2 Concentrated water pipe: 2 1/2B Flange (JIS10K)(65A)		
Dimensions (H×W×D)	mm	1,450×835×690	1,450×1,280×690		1,500×1,925×690	1,500×2,570×690	1,550×3,230×758	1,550×3,870×758	
Weight	kg	150	250	260	440	510	715	790	
Operating weight	kg	152	252	263	446	517	730	820	
Operation range	°C	-15 to 43							
Concentrated water pipe kit *2		—					BWKP66A634	BWKP66A754	

Notes:

*1 Cooling capacity is based on the following conditions : Entering water temp. 12°C (53.6°F), leaving chilled water temp. 7°C (44.5°F), and outdoor temp. 35°C DB (95°F DB).

*2 Concentrated water pipe kits are necessary optional accessories of the unit. (field-installed)

Concentrated water pipe kits are not included in the chilling unit as standard parts.

*3 The following safety devices are equipped as standard. • High pressure switch. • Fan motor thermal protector. • Fusible plug. • Inverter overcurrent protector
• Comp. overcurrent relay.

*4 This product is manufactured in Japan.

Air Cooled Water Chillers

Option List

Model	UWAP40BY1 UWAP40BYB	UWAP50BY1 UWAP50BYB	UWAP60BY1 UWAP60BYB	UWAP80BY1	UWAP100BY1 UWAP100BYB	UWAP120BY1 UWAP120BYB	UWAP140BY1	UWAP160BY1	UWAP180BY1
Remote controller	BRC307D521								
Chilling water supply interrupting relay	GWEL-UWYP40B				GWEL-UWYP100B			GWEL-UWYP180B	
Water high pressure (1.6 MPa) upgrader	GWP-UWYP40B			GWP-UWYP80B	GWP-UWYP100B				GWP-UWYP180B
IPU	DAM602B51/DAM602B52								
Dio unit	DEC102A51								
DIII Ai unit	DAM101A51								
Interface for use in LonWorks®	DMS504B51								
Interface for use in BACnet®	DMS502B51								
Central remote controller	DCS302CA61								
Unified ON/OFF controller	DCS301BA61								
Schedule timer	DST301BA61								

Model	UWAP200BY1	UWAP220BY1	UWAP240BY1	UWAP280BY1	UWAP320BY1	UWAP360BY1	UWAP400BY1	UWAP440BY1	UWAP480BY1
Remote controller	BRC307D521								
Chilling water supply interrupting relay	GWEL-UWYP180B			GWEL-UWYP280B		GWEL-UWYP360B			
Water high pressure (1.6 MPa) upgrader	GWP-UWYP180B			GWP-UWYP280B		GWP-UWYP360B			
IPU	DAM602B51/DAM602B52								
Dio unit	DEC102A51								
DIII Ai unit	DAM101A51								
Interface for use in LonWorks®	DMS504B51								
Interface for use in BACnet®	DMS502B51								
Central remote controller	DCS302CA61								
Unified ON/OFF controller	DCS301BA61								
Schedule timer	DST301BA61								



Model	UWAP75AY3	UWAP125AY3	UWAP190AY3	UWAP250AY3	UWAP375AY3	UWAP500AY3	UWAP630AY3	UWAP750AY3
Remote controller	*1 BRC307C50							
Communication I/F P.C. board	BRP66B3×1							
Communication I/F P.C. B storage box	BRP66A97×1(external)		BRP66A100×1(internal)		Not required (S.Box installed)			
Transmission wire	BER66A5×1		BER66A7×1					
Central remote controller	*1 DCS302CA61							
Unified ON/OFF controller	*1 DCS301BA61							
Schedule timer	*1 DST301BA61							

Notes:

*1 Communication I/F P.C. board, Communication I/F P.C. B storage box and Transmission wire are also required.

Model	UWAXP125AY1	UWAXP190AY1	UWAXP250AY1	UWAXP375AY1	UWAXP500AY1	UWAXP630AY1	UWAXP750AY1
Remote controller	*1 BRC307C50						
Communication I/F P.C. board	BRP66B3×1					BRP66B3×2	
Communication I/F P.C. B storage box	—	BRP66A97		—	BRP66A96		
Transmission wire	BER66A5	BER66A6		BER66A7		BER66A8	
Concentrated water pipe kit	*2 —				BWKP66A634		BWKP66A754

Notes:

*1 Communication I/F P.C. board, Communication I/F P.C. B storage box and Transmission wire are also required.

*2 Concentrated water pipe kits are necessary optional accessories of the unit. (field-installed)

Concentrated water pipe kits are not included in the chilling unit as standard parts.



Air Cooled Water Chillers - Heat Pump Type

R-407C : UWYP Series



UWYP750AY3

UWYP120BY1

UWYP180BY1

Model Lineup

	Refrigerant	Units series	Model No.	Capacity (kW)												page		
				6.7/7.5	11.2/12.5	17/19	22.4/25	33.5/37.5	45/50	56/63	67/75	106	132	160	210		265	
50/60Hz	R-407C	Standard Unit	UWYP—AY3	—	125	190	250	375	500	630	750	—	—	—	—	—	19	
50Hz			UWYP—BY1	—	—	—	—	—	—	—	—	—	40	50	60	80	100	19
60Hz			UWYP—BYB	—	—	—	—	—	—	—	—	—	—	40	50	60	—	100

	Refrigerant	Units series	Model No.	Capacity (kW)												page	
				315	370	420	480	530	580	630	740	840	960	1060	1160		1260
50Hz	R-407C	Standard Unit	UWYP—BY1	120	140	160	180	200	220	240	280	320	360	400	440	480	19, 20
60Hz			UWYP—BYB	120	—	—	—	—	—	—	—	—	—	—	—	—	—

New Refrigerant

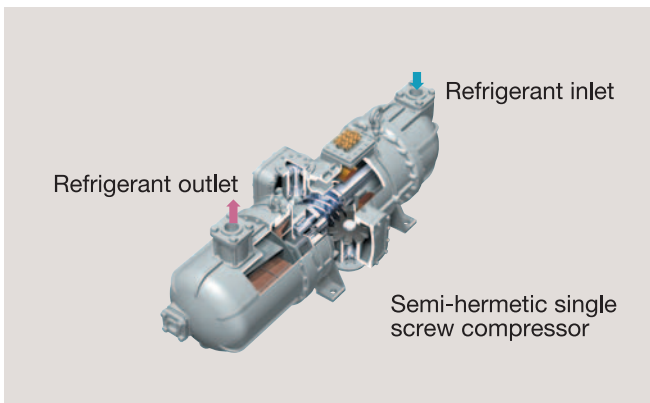
- UWYP125 — 750AY3
- UWYP40 — 480BY1
- UWYP40 — 120BYB
- Employs the new refrigerant R-407C.

Low Power Consumption

- UWYP40 — 160BY1
- UWYP40 — 120BYB
- Continuous capacity control with a range from 10(12)% to 100% helps to reduce energy wastage during low-load operation.

Efficient and Reliable Compressors

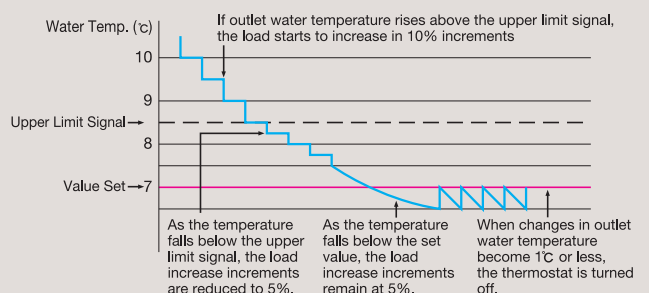
- Applies to All Models
- To improve their operational reliability, 40 – 480HP models are equipped with semi-hermetic single screw compressors.



High Precision

- UWYP40 — 160BY1
- UWYP40 — 120BYB
- The outlet water temperature is precisely controlled to within 0.5°C (with a stable load) through the use of electric expansion valves and continuous capacity control.

Example of Outlet Water Temperature Control



Wide Operation Range

- UWYP40 — 480BY1
- UWYP40 — 120BYB

- A new defrosting system makes possible heating operation even when the outdoor temperature is as low as -15°C .

Note: Measures to protect against drain water freezing are necessary in cold regions where the highest temperature stays below 0°C on several consecutive days.

Capacity	Outdoor Air Temperature Range where Cooling Possible
5 — 30HP	-15 to 43°C
40 — 480HP	-5 to 43°C

Multiple Operating Modes

- UWYP40 — 160BY1
- UWYP40 — 120BYB

- Users can select the operating mode that best matches the heat source application.

Capacity Control Mode

The user can select to give priority to either precision or reduced power consumption.

High-Precision Mode

Continues operation to levels as low as 12% of total capacity to provide stable water temperature control even during low-load periods.

Low-Power Mode

This mode can be used to reduce power consumption if highly precise water temperature control is not necessary during low-load periods. It shuts down the compressor when the load drops below 40%.

Note: Switching between the above modes is accomplished using a control on the outdoor unit.

Demand Mode

Current Demand Function

The maximum current level of the compressor can be specified in order to control demand for power. Since this function allows setting of the upper limit current value, comfortable operation is maintained while effectively controlling demand. In contrast to conventional capacity control step limit systems, maximum capacity is maintained at the desired demand value.

- UWYP100 — 480BY1
- UWYP100 — 120BYB

- Duty cycling control equalises the operating time of the compressors.

- UWYP40 — 160BY1
- UWYP40 — 120BYB

- A choice of three control systems is available.

Outflow water temperature control

Provides precise control of the water temperature.

Compressor count control

Controls the number of compressors operating depending on the load.

Inflow water temperature control

Performs duty cycling control.

Easy Installation

- UWYP40 — 480BY1
- UWYP40 — 120BYB

- The compact design of these units significantly reduces the space required for installation.

In the outdoor unit, component parts of a small size have been used wherever possible to reduce its size and correspondingly reduce how much space it requires. Furthermore, replacing the 2-way refrigerant inlets with 4-way inlets has reduced the amount of space the outdoor unit needs even further.

- UWYP125 — 750AY3

- The horizontal linkup design increases installation flexibility.

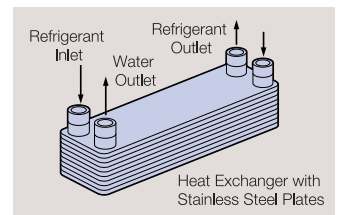
This design realises the installation does not protrude so far, making it possible to install water chillers along a wall or under a roof overhang.

Note: Water supply piping must be purchased separately.
(UWYP375AY3 — 750AY3)

Reliability

- Applies to All Models

- Stainless steel heat exchanger plates prevent rust, thereby improving their durability and the system's operational reliability.



- Applies to All Models

- Air heat exchangers employ fins with acrylic coating for superior durability.

- UWYP40 — 480BY1
- UWYP40 — 120BYB

- Defrosting is performed under computer control as part of continuous capacity control, resulting in stable heating performance.

The system detects ice formation by constantly monitoring the outdoor temperature, the pressures of the high- and low-pressure components, and the timers. In addition, continuous capacity control allows smooth control of capacity even after a rise in the pressure of the high-pressure components. Remaining ice is melted a little at a time, and stable heating performance is maintained.

Air Cooled Water Chillers - Heat Pump Type

50/60Hz
R-407C

Standard Unit
UWYP125 — 750AY3

11.2 / 12.5 — 67 / 75 kW class



Specifications

Model		UWYP125AY3 (5HP)	UWYP190AY3 (8HP)	UWYP250AY3 (10HP)	UWYP375AY3 (15HP)	UWYP500AY3 (20HP)	UWYP630AY3 (25HP)	UWYP750AY3 (30HP)	
Cooling capacity (50/60 Hz)	*1 kW	11.2/12.5	17.0/19.0	22.4/25.0	33.5/37.5	45.0/50.0	56.0/63.0	67.0/75.0	
	Btu/h	38,200/42,700	58,000/64,900	76,500/85,400	114,000/128,000	154,000/171,000	191,000/215,000	229,000/256,000	
Chilled water flow rate (50/60 Hz)	USRT	3.19/3.55	4.83/5.40	6.37/7.11	9.53/10.7	12.8/14.2	15.9/17.9	19.1/21.3	
	ℓ/min	32/36	49/54	64/72	96/108	129/143	161/181	192/215	
Heating capacity (50/60 Hz)	*2 kW	13.2/15.0	20.0/22.4	25.0/28.0	37.5/42.5	50.0/56.0	63.0/71.0	75.0/85.0	
	Btu/h	45,100/51,200	68,300/76,500	85,400/95,600	128,000/145,000	171,000/191,000	215,000/242,000	256,000/290,000	
Power supply	USRT	3.75/4.27	5.69/6.37	7.11/7.96	10.7/12.1	14.2/15.9	17.9/20.2	21.3/24.2	
	3 phase, 380/400/415 V, 50 Hz, 400/440 V, 60 Hz, 3 wires system								
Hot water flow rate (50/60 Hz)	ℓ/min	38/43	57/64	72/80	108/122	143/161	181/204	215/244	
Capacity steps	%	100-0			100-67-34-0	100-50-0	100-80-60-40-20-0	100-67-34-0	
Compressor	Type	Hermetically sealed scroll type							
	Motor output kW	3.75×1	5.5×1	7.5×1	7.5+3.75	7.5×2	7.5×2+3.75	7.5×3	
Evaporator type	Brazed plate heat exchanger								
Condenser type	Cross fin coil								
Fan	Type	Propeller							
	Drive	Direct drive							
	Air flow rate (50/60 Hz)	m ³ /min cfm	90/95 3,180/3,350	140/160 4,940/5,650	175/185 6,180/6,530	265/280 9,350/9,880	350/370 12,400/13,100	440/465 15,500/16,400	525/555 18,500/19,600
	Motor output kW	0.20	0.22+0.14	0.22×2	0.22×2+0.20	0.22×4	0.22×4+0.20	0.22×6	
Refrigerant	R-407C								
Pipe connections water inlet/outlet		1B Flange (JIS10K)(25A)×2	1 1/2B Flange(JIS10K)(40A)×2		1B Flange (JIS10K) (25A)×2+1 1/2B Flange (JIS10K)(40A)×2	1 1/2B Flange (JIS10K)(40A)×4	1B Flange (JIS10K) (25A)×2+1 1/2B Flange (JIS10K)(40A)×4	1 1/2B Flange (JIS10K)(40A)×6	
Dimensions (H×W×D)	mm	1,450×635 (839)×690	1,450×1,280×690		1,500×1,925×690	1,500×2,570×690	1,550×3,230×758	1,550×3,870×758	
Weight	kg	150	258	260	420	525	700	820	
Operating weight	kg	152	261	264	427	535	715	840	
Operation range	°C	0 to 43 in cooling, -15 to 21 in heating							

Notes:

*1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95 FDB).

*2 Heating capacity is based on the following conditions : Leaving hot water temp.45°C (113°F), entering hot water temp. 40°C (104°F), and outdoor air temp. 7°C DB(44.5 FDB), and 6°C WB(43°FWB).

*3 The following safety devices are equipped as standard. • High pressure switch. • Reverse-phase protector. • Fusible plug. • Freeze up thermostat. • Overcurrent relay for compressor and fan motor. • Overheat protection for discharge gas. • fan thermal protector. *4 This product is manufactured in Japan.

50Hz
R-407C

Standard Unit
UWYP40 — 180BY1

106 — 480kW class



Specifications

Model		UWYP40BY1 (40HP)	UWYP50BY1 (50HP)	UWYP60BY1 (60HP)	UWYP80BY1 (80HP)	UWYP100BY1 (100HP)	UWYP120BY1 (120HP)	UWYP140BY1 (140HP)	UWYP160BY1 (160HP)	UWYP180BY1 (180HP)	
Cooling capacity	kW	106	132	160	210	265	315	370	420	480	
	Btu/h	362,000	450,000	546,000	717,000	904,000	1,075,000	1,263,000	1,433,000	1,638,000	
Chilled water flow rate	USRT	30	38	46	60	75	90	105	119	137	
	ℓ/min	304	378	459	602	760	903	1,061	1,204	1,376	
Heating capacity	kW	112	140	170	230	280	340	400	460	510	
	Btu/h	382,000	478,000	580,000	785,000	956,000	1,160,000	1,365,000	1,570,000	1,740,000	
Power supply	USRT	32	40	48	65	80	97	114	131	145	
	3 phase, 380/400/415 V, 50 Hz, 3wires system										
Hot water flow rate	ℓ/min	321	401	487	659	803	975	1,147	1,319	1,462	
Capacity steps	%	100~10-0									
Compressor	Type	Semi-hermetic sealed single-screw type									
	Motor output kW	30×1	37×1	45×1	60×1	37×2	45×2	45+60	60×2	45×3	
Evaporator type	Brazing Plate type										
Condenser type	Cross fin coil										
Condenser Fans	Type	Propeller									
	Drive	Direct drive									
	Air flow rate (50/60 Hz)	m ³ /min cfm	780 27,534	860 30,358	1,290 45,537	1,600 56,480	1,720 60,716	2,150 75,895	2,580 91,074	2,580 91,074	2,580 91,074
	Motor output kW	0.5×4	1.0×4	1.0×6	1.0×8	1.0×8	1.0×10	1.0×12			
Refrigerant	R-407C										
Pipe connections water inlet/outlet	Water inlet/outlet	3B Flange (80A HG20593-97)				4B Flange (100A HG20593-97)				5B Flange (125A HG20593-97)	
	Drain outlet	RP1 1/4 Female screw (32A)									
Dimensions (H×W×D)	mm	2,456×2,200×2,000			2,456×2,650×2,000	2,456×4,400×2,000		2,456×4,850×2,000	2,456×5,300×2,000	2,456×6,600×2,000	
Weight	kg	1,800	1,930	1,990	2,640	3,740	3,995	4,553	5,110	6,265	
Operating weight	kg	1,833	1,966	2,030	2,687	3,791	4,052	4,624	5,181	6,456	
Operation range	°C	cooling -5 to 43, heating -20 to 21									

Notes:

*1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95 FDB).

*2 Heating capacity is based on the following conditions : Leaving hot water temp.45°C (113°F), entering hot water temp.40°C (104°F), and outdoor air temp. 7°C DB(44.5 FDB), and 6°C WB(43°FWB).

*3 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.

*4 The unit is equipped with standard water filter. *5 "The limited length of wire" represents its max. length when the pressure is lower than 2%.

*6 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required. *7 This product is manufactured in China.

50Hz
R-407C

Standard Unit
UWYP200 — 480BY1
530 — 1,260kW class



■ Specifications

Model		UWYP200BY1 (200HP)	UWYP220BY1 (220HP)	UWYP240BY1 (240HP)	UWYP280BY1 (280HP)	UWYP320BY1 (320HP)	UWYP360BY1 (360HP)	UWYP400BY1 (400HP)	UWYP440BY1 (440HP)	UWYP480BY1 (480HP)		
Cooling capacity	kW	530	580	630	740	840	960	1,060	1,160	1,260		
	Btu/h	1,809,000	1,979,000	2,150,000	2,525,000	2,867,000	3,276,000	3,617,000	3,959,000	4,300,000		
Chilled water flow rate	USRT	151	165	179	210	239	273	301	330	358		
	ℓ/min	1,519	1,663	1,806	2,121	2,408	2,752	3,039	3,325	3,612		
Heating capacity	kW	570	630	690	800	920	1,020	1,140	1,260	1,380		
	Btu/h	1,945,000	2,150,000	2,355,000	2,730,000	3,140,000	3,481,000	3,890,000	4,300,000	4,710,000		
Power supply	USRT	162	179	196	228	262	290	324	358	392		
	3 phase, 380/400/415 V, 50 Hz, 3 wires system											
Hot water flow rate	ℓ/min	1,634	1,806	1,978	2,293	2,637	2,924	3,268	3,612	3,956		
Capacity steps	%	100-10-0										
Compressor	Type	Semi-hermetic sealed single-screw type										
	Motor output	kW	45×2+60	45+60×2	60×3	(45+60)×2	(60×2)×2	(45×3)×2	(45×2+60)×2	(45+60×2)×2	(60×3)×2	
Evaporator type	Brazeing Plate type											
Condenser type	Cross fin coil											
Condenser Fans	Type	Propeller										
	Drive	Direct drive										
Air flow rate	ℓ/min	3,010	3,440	3,870	4,300	5,160		6,020	6,880	7,740		
	cfm	106,253	121,432	136,611	151,790	182,148		212,506	242,864	273,222		
Motor output	kW	1.0×14	1.0×16	1.0×18	(1.0×10)×2	(1.0×14)×2		(1.0×14)×2	(1.0×16)×2	(1.0×18)×2		
Refrigerant	R-407C											
Pipe connections	Water inlet/outlet	5B Flange (125A HG20593-97)				4B Flange (100A HG20593-97)		5B Flange (125A HG20593-97)				
	Drain outlet	RP1 1/4 Female screw (32A)										
Dimensions (H×W×D)	mm	2,456×7,050×2,000	2,456×7,500×2,000	2,456×7,950×2,000	(2,456×4,850×2,000)×2	(2,456×5,300×2,000)×2	(2,456×6,600×2,000)×2	(2,456×7,050×2,000)×2	(2,456×7,500×2,000)×2	(2,456×7,950×2,000)×2		
Weight	kg	6,820	7,500	7,885	4,553×2	5,110×2	6,265×2	6,820×2	7,500×2	7,885×2		
Operating weight	kg	7,018	7,719	8,125	4,624×2	5,181×2	6,456×2	7,018×2	7,719×2	8,125×2		
Operation range	°C	cooling -5 to 43, heating -20 to 21										

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95°FDB).
- *2 Heating capacity is based on the following conditions : Leaving hot water temp.45°C (113°F), entering hot water temp.40°C (104°F), and outdoor air temp. 7°C DB(44.5°FDB),and 6°C WB(43°FWB).
- *3 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
- *4 The unit is equipped with standard water filter. *5 "The limited length of wire" represents its max. length when the pressure is lower than 2%.
- *6 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required. *7 This product is manufactured in China.

60Hz
R-407C

Standard Unit
UWYP40 — 120BYB
118 — 355kW class



■ Specifications

Model		UWYP40BYB (40HP)	UWYP50BYB (50HP)	UWYP60BYB (60HP)	UWYP100BYB (100HP)	UWYP120BYB (120HP)	
Cooling capacity	kW	118	150	180	300	355	
	Btu/h	403,000	512,000	614,000	1,024,000	1,212,000	
Chilled water flow rate	USRT	34	43	51	85	101	
	ℓ/min	338	430	516	860	1,018	
Heating capacity	kW	132	170	200	335	400	
	Btu/h	450,000	580,000	683,000	1,143,000	1,365,000	
Power supply	USRT	38	48	57	95	114	
	3 phase, 400/440 V, 60 Hz, 3 wires system						
Hot water flow rate	ℓ/min	378	487	573	960	1,147	
Capacity steps	%	100~10-0					
Compressor	Type	Semi-hermetic sealed single-screw type					
	Motor output	kW	30×1	37×1	45×1	37×2	45×2
Evaporator type	Brazeing Plate type						
Condenser type	Cross fin coil						
Condenser Fans	Type	Propeller					
	Drive	Direct drive					
Air flow rate	ℓ/min	810	1,010		2,020		
	cfm	28,593	35,653		71,306		
Motor output	kW	0.5×4	1.0×4		1.0×8		
Refrigerant	R-407C						
Pipe connections	Water inlet/outlet	3B Flange (80A HG20593-97)			4B Flange (100A HG20593-97)		
	Drain outlet	RP1 1/4 Female screw (32A)					
Dimensions (H×W×D)	mm	2,456×2,200×2,000				2,456×4,400×2,000	
Weight	kg	1,690	1,810	1,870	3,500	3,605	
Operating weight	kg	1,723	1,846	1,910	3,551	3,662	
Operation range	°C	cooling -5 to 43, heating -20 to 21					

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), and outdoor air temp. 35°C DB(95°FDB).
- *2 Heating capacity is based on the following conditions : Leaving hot water temp.45°C (113°F), entering hot water temp.40°C (104°F), and outdoor air temp. 7°C DB(44.5°FDB),and 6°C WB(43°FWB).
- *3 The following safety devices are equipped as standard. • High pressure protector. • Low pressure protector. • Compressor thermal protector. • Fusible plug. • Reverse-phase protector. • Overheat protection of discharge gas. • Overcurrent relay(compressor). • Freeze-up protection thermostat. • Overcurrent relay(fan). • Safety valve.
- *4 The unit is equipped with standard water filter. *5 "The limited length of wire" represents its max. length when the pressure is lower than 2%.
- *6 Standard for the max. chilled water pressure is 1.0MPa, but 1.6MPa is available if required. *7 This product is manufactured in China.

Air Cooled Water Chillers - Heat Pump Type

Option List

Model	UWYP40BY1 UWYP50BY1 UWYP60BY1 UWYP40BYB UWYP50BYB UWYP60BYB	UWYP80BY1	UWYP100BY1 UWYP120BY1 UWYP140BY1 UWYP160BY1 UWYP100BYB UWYP120BYB	UWYP180BY1 UWYP200BY1 UWYP220BY1 UWYP240BY1	UWYP280BY1 UWYP320BY1	UWYP360BY1 UWYP400BY1 UWYP440BY1 UWYP480BY1
Remote controller	BRC307D521					
Chilling water supply interrupting relay	GWEL-UWYP40B		GWEL-UWYP100B	GWEL-UWYP180B	GWEL-UWYP280B	GWEL-UWYP360B
Water high pressure (1.6 MPa) upgrader	GWP-UWYP40B	GWP-UWYP80B	GWP-UWYP100B	GWP-UWYP180B	GWP-UWYP280B	GWP-UWYP360B
IPU	DAM602B51/DAM602B52					
Dio unit	DEC102A51					
D III Ai unit	DAM101A51					
Interface for use in LonWorks®	DMS504B51					
Interface for use in BACnet®	DMS502B51					
Central remote controller	DCS302CA61					
Unified ON/OFF controller	DCS301BA61					
Schedule timer	DST301BA61					

Model	UWYP125AY3	UWYP190AY3	UWYP250AY3	UWYP375AY3	UWYP500AY3	UWYP630AY3	UWYP750AY3
Remote controller	*1 BRC307C50						
Communication I/F P.C. board	BRP66B3						
Communication I/F P.C. B storage box	BPR66A97	BPR66A100	—				
Transmission wire	BER66A5	BER66A7					

Notes:

*1 Communication I/F P.C. board, Communication I/F P.C. B storage box and Transmission wire are also required.





Water Cooled Water Chillers

R-407C : UWP Series

R-134a : ZUW Series



UWP900AY3



ZUW175AY1

Model Lineup

Refrigerant	Units series	Model No.	Capacity (kW)													page		
			8/9	13.2/15	20/22.4	26.5/30	40/45	53/60	67/75	80/90	118	150	180	236	300		355	
50/60Hz	R-407C	Standard Unit	UWP—AY3	90	150	224	300	450	600	750	900	—	—	—	—	—	—	24

Refrigerant	Units series	Model No.	Capacity										page	
			100RT	120RT	150RT	175RT	200RT	240RT	280RT	300RT	350RT	400RT		
50Hz	R-134a	Standard Unit	ZUW—AY1	100	120	150	175	200	240	280	300	350	400	25
60Hz			ZUW—AYB	—	120	150	175	200	240	—	300	—	—	25
50Hz		Brine Cooling Unit	ZUW—AY1Z	100	120	150	175	200	240	280	300	350	400	26
60Hz			ZUW—AYBZ	—	120	150	175	200	240	—	300	—	—	26

New Refrigerant

- UWP90 — 900AY3
- ZUW100 — 400AY(1)(B)
- ZUW100 — 400AY(1)(B)Z

- Employs the new refrigerants R-407C and R-134a.

Year Round Cooling Operation

- Applies to All Models

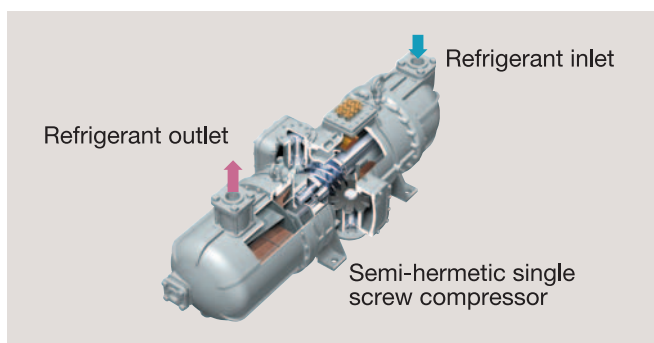
- Provides a stable supply of chilled water throughout the year.

Since the heat exchanger employs water, operation of the unit is not affected by changes in the outdoor temperature. A stable water temperature is maintained year round.

Efficient and Reliable Compressors

- Applies to All Models

- To improve their operational reliability, 5 – 30HP models employ scroll compressors, while 40 – 120HP models are equipped with semi-hermetic single screw compressors.



Wide Water Temperature Control Range

- UWP90AY3 — 900AY3

- The water temperature setting can be set to any value between 4 and 25 °C.

Easy Installation

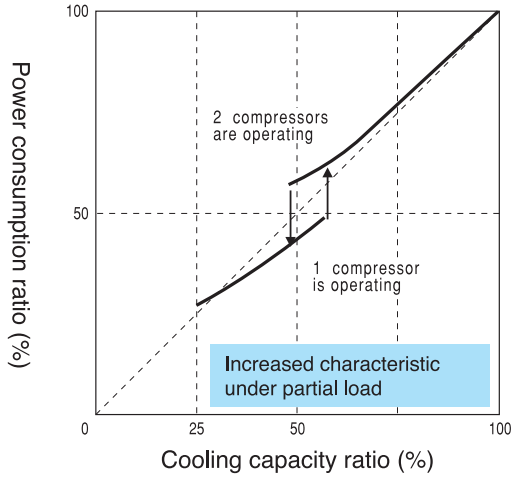
- UWP90AY3 — 900AY3

- The 10 HP model has a footprint measuring only 0.32 square meters.

8 to 30 HP models have a modular design that enables units with different capacities to be used together in a single system and simplifies increasing system capacity later on 3 — 5 HP models have a similar configuration and are designed for compactness.

Efficient Performance

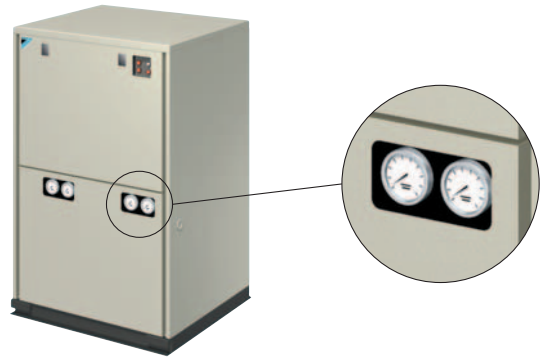
- Performance characteristics under partial load are efficient.



Reliability

Well Appointed

- All models are fitted with a pressure gauge as standard.



Maintenance

UWP90AY3 — 900AY3

- The double-pipe heat exchanger and an individual error indication function help reduce the manpower required for maintenance.

The new double-pipe heat exchanger design reduces clogging, significantly increasing resistance to dirty cooling water.

50/60Hz
R-407C

Standard Unit
UWP90 — 900AY3
8 / 9 — 80 / 90kW class



Water Cooled
Water Chillers

Specifications

Model	UWP90AY3 (3HP)	UWP150AY3 (5HP)	UWP224AY3 (8HP)	UWP300AY3 (10HP)	UWP450AY3 (15HP)	UWP600AY3 (20HP)	UWP750AY3 (25HP)	UWP900AY3 (30HP)	
Cooling capacity (50/60 Hz)	kW	8.0/9.0	13.2/15.0	20.0/22.4	26.5/30.0	40.0/45.0	53.0/60.0	67.0/75.0	80.0/90.0
	Btu/h	27,300/30,700	45,100/51,200	68,300/76,500	90,500/102,000	137,000/154,000	181,000/205,000	229,000/256,000	273,000/307,000
	USRT	2.28/2.56	3.75/4.27	5.69/6.37	7.54/8.53	11.4/12.8	15.1/17.1	19.1/21.3	22.8/25.6
Power supply	3 phase, 380/400/415 V, 50 Hz, 400/440 V, 60 Hz, 3 wires system								
Chilled water flow rate (50/60 Hz)	ℓ/min	23/26	38/43	57/64	76/86	115/129	152/172	192/215	229/258
Capacity steps	%	100-0			100-50-0		100-60-0		100-67-0
Compressor	Type	Hermetically sealed scroll type							
	Motor output kW	3.0×1	3.75×1	5.5×1	7.5×1	5.5×2	7.5×2	7.5+5.5×2	7.5×3
Evaporator type	Braze plate heat exchanger								
Condenser type	Double pipe condenser								
Refrigerant	R-407C								
Pipe connections	Condenser water inlet/outlet	FPT1 (25A)		FPT1 1/2 (40A)		FPT1 1/2 × 2 (40A)		FPT1 1/2 × 3 (40A)	
	Chilled water inlet/outlet	FPT1 (25A)		FPT1 1/2 (40A)		FPT1 1/2 × 2 (40A)		FPT1 1/2 × 3 (40A)	
	Drain outlet	FPT3/4 (20A)							
Dimensions (H×W×D)	mm	1,280 × 405 × 690		1,280 × 405 × 790		1,280 × 808 × 790		1,280 × 1,211 × 790	
Weight	kg	100	110	150	160	305	325	465	485
Operating weight	kg	102	112	154	165	313	335	478	500

Notes:

*1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7°C (44.5°F), entering chilled water temp.12°C (53.6°F), leaving condenser water temp. 35°C (95°F), entering condenser water temp. 30°C (86°F).

*2 The following safety devices are equipped as standard. • High/low pressure switch. • Freeze-up protection thermostat. • Overcurrent relay for compressors. • Reverse-phase protector. • Discharge gas overheat protector. • Fusible plug. • Safety valve.

*3 This product is manufactured in Japan.

Water Cooled Water Chillers

50Hz
R-134a

Standard Unit
ZUW100 — 400AY1
367 — 1,450kW class



Specifications

Model	ZUW100AY1 (100RT)	ZUW120AY1 (120RT)	ZUW150AY1 (150RT)	ZUW175AY1 (175 RT)	ZUW200AY1 (200RT)	ZUW240AY1 (240RT)	ZUW280AY1 (280RT)	ZUW300AY1 (300RT)	ZUW350AY1 (350RT)	ZUW400AY1 (400RT)	
Cooling capacity	kW	367	454	508	631	710	857	1,000	1,114	1,260	1,450
	Btu/h	1,252,132	1,548,959	1,733,196	2,152,848	2,422,381	2,923,916	3,411,804	3,800,750	4,298,874	4,947,117
	USRT	104	129	144	179	202	244	284	317	358	412
Power supply	3 phase, 380/400/415 V, 50 Hz, 3 wires system										
Chilled water flow rate	ℓ/min	1,052	1,301	1,456	1,809	2,035	2,457	2,867	3,193	3,612	4,157
Condenser water flow rate	ℓ/min	1,253	1,545	1,727	2,153	2,400	2,930	3,407	3,773	4,235	4,883
Compressor	Type	single screw compress									
	Motor output	kW	37×2	45×2	60×2	75×2	90×2	90+110	110×2	130×2	
	Capacity control	%	100~25-0 continuous capacity control							100~10-0 continuous capacity control	
Evaporator type	Flooded shell and tube type										
Condenser type	shell and tube type										
Refrigerant	R-134a										
Pipe connections	Condenser water inlet/outlet	5B Flange (125A HG20593-97)				6B Flange (150A HG20593-97)		8B Flange (200A HG20593-97)			
	Chilled water inlet/outlet	5B Flange (125A HG20593-97)				6B Flange (150A HG20593-97)				8B Flange (200A HG20593-97)	
	Safety valve	NPT1 1/2×1									
Dimensions (H×W×D)	mm	1,765×1,160×3,530			1,765×1,210×3,680	1,830×1,320×3,960	2,000×1,400×4,000	2,060×1,470×4,550			2,270×1,830×4,250
Weight (Approx.)	kg	3,500	3,650	3,750	3,900	4,750	5,250	6,650	6,750	8,300	8,450
Operating weight (Approx.)	kg	3,700	3,850	4,000	4,150	5,050	5,600	7,100	7,200	8,900	9,150

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7℃(44.5°F), entering chilled water temp.12℃(53.6°F), leaving condenser water temp. 35℃(95°F), entering condenser water temp.30℃(86°F).
- *2 The following safety devices are equipped as standard. • High/low pressure switch. • Freeze-up protection thermostat. • Overcurrent relay for compressors. • Compressor thermal protector. • Reverse-phase protector. • Discharge gas overheat protector. • Fusible plug. • Safety valve.
- *3 This product is manufactured in China.

60Hz
R-134a

Standard Unit
ZUW120 — 300AYB
441 — 1,040kW class



Specifications

Model	ZUW120AYB (120RT)	ZUW150AYB (150RT)	ZUW175AYB (175RT)	ZUW200AYB (200RT)	ZUW240AYB (240RT)	ZUW300AYB (300RT)	
Cooling capacity	kW	441	542	606	759	848	1,040
	Btu/h	1,504,606	1,849,198	2,067,554	2,589,560	2,893,211	3,548,277
	USRT	125	154	172	216	241	296
Power supply	3 phase, 400/440 V, 60 Hz, 3 wires system						
Chilled water flow rate	ℓ/min	1,264	1,553	1,737	2,175	2,430	2,981
Condenser water flow rate	ℓ/min	1,517	1,864	2,085	2,609	2,903	3,584
Compressor	Type	single screw compress					
	Motor output	kW	37×2	45×2	60×2	75×2	90×2
	Capacity control	%	100~25-0 continuous capacity control				
Evaporator type	Flooded shell and tube type						
Condenser type	shell and tube type						
Refrigerant	R-134a						
Pipe connections	Condenser water inlet/outlet	5B Flange (125A HG20593-97)			6B Flange (150A HG20593-97)		8B Flange (200A HG20593-97)
	Chilled water inlet/outlet	5B Flange (125A HG20593-97)			6B Flange (150A HG20593-97)		
	Safety valve	FPT1/2					
Dimensions (H×W×D)	mm	1,765×1,160×3,400			1,830×1,320×3,600	2,000×1,400×3,960	2,060×1,680×4,000
Weight (Approx.)	kg	3,800	4,150	4,450	5,100	5,850	6,350
Operating weight (Approx.)	kg	4,000	4,400	4,700	5,400	6,200	6,800

Notes:

- *1 Cooling capacity is based on the following conditions : Leaving chilled water temp.7℃(44.5°F), entering chilled water temp.12℃(53.6°F), leaving condenser water temp. 35℃(95°F), entering condenser water temp.30℃(86°F).
- *2 The following safety devices are equipped as standard. • High/low pressure switch. • Freeze-up protection thermostat. • Overcurrent relay for compressors. • Compressor thermal protector. • Reverse-phase protector. • Discharge gas overheat protector. • Fusible plug. • Safety valve.
- *3 This product is manufactured in China.

50Hz
R-134a

Brine Cooling Unit
ZUW100 — 400AY1Z
190 — 715kW class



■ Specifications

Model	ZUW100AY1Z (100RT)	ZUW120AY1Z (120RT)	ZUW150AY1Z (150RT)	ZUW175AY1Z (175RT)	ZUW200AY1Z (200RT)	ZUW240AY1Z (240RT)	ZUW280AY1Z (280RT)	ZUW300AY1Z (300RT)	ZUW350AY1Z (350RT)	ZUW400AY1Z (400RT)	
Cooling capacity	kW	190	243	272	338	382	459	534	599	628	715
	Btu/h	648,243	829,069	928,011	1,153,190	1,303,309	1,566,018	1,821,904	2,043,671	2,142,613	2,439,440
	USRT	54	69	77	96	109	131	152	170	179	203
Power supply	3 phase, 380/400/415V, 50Hz, 3 wires system										
Brine flow rate	ℓ/min	545	697	780	969	1,095	1,316	1,531	1,717	1,800	2,050
Condenser water flow rate	ℓ/min	730	920	1,032	1,287	1,458	1,758	2,049	2,282	2,379	2,723
Compressor	Type	single screw compress									
	Motor output	kW	37×2	45×2	60×2	75×2	90×2	90+110	110×2	130×2	
	Capacity control	%	100~25-0 continuous capacity control							100~10-0 continuous capacity control	
Evaporator type	Flooded shell and tube type										
Condenser type	shell and tube type										
Refrigerant	R-134a										
Pipe connections	Condenser water inlet/outlet	5B Flange (125A HG20593-97)				6B Flange (150A HG20593-97)		8B Flange (200A HG20593-97)			
	Brine inlet/outlet	5B Flange (125A HG20593-97)				6B Flange (150A HG20593-97)				8B Flange (200A HG20593-97)	
	Safety valve	NPT1 1/2×1									
Dimensions (H×W×D)	mm	1,765×1,160×3,400			1,765×1,210×3,680	1,830×1,320×3,960	2,000×1,400×4,000	2,060×1,470×4,550		2,270×1,830×4,250	
Weight (Approx.)	kg	3,500	3,650	3,750	3,900	4,750	5,250	6,650	6,750	8,300	8,450
Operating weight (Approx.)	kg	3,700	3,850	4,000	4,150	5,050	5,600	7,100	7,200	8,900	9,150

Notes:

*1 Cooling capacity is based on the following conditions : Leaving brine temp.-5℃ (23.0°F), entering brine temp.-2℃ (28.4°F), leaving condenser water temp. 35℃ (95°F), entering condenser water temp. 30℃ (86°F).

*2 The following safety devices are equipped as standard. • High/low pressure switch. • Freeze-up protection thermostat. • Overcurrent relay for compressors. • Compressor thermal protector. • Reverse-phase protector. • Discharge gas overheat protector. • Fusible plug. • Safety valve. *3 This product is manufactured in China.

60Hz
R-134a

Brine Cooling Unit
ZUW120 — 300AYBZ
233 — 555kW class



■ Specifications

Model	ZUW120AYBZ (120RT)	ZUW150AYBZ (150RT)	ZUW175AYBZ (175RT)	ZUW200AYBZ (200RT)	ZUW240AYBZ (240RT)	ZUW300AYBZ (300RT)	
Cooling capacity	kW	233	290	320	400	460	555
	Btu/h	794,951	989,423	1,091,778	1,364,722	1,569,430	1,893,552
	USRT	66	82	91	114	131	158
Power supply	3 phase, 400/440 V, 60Hz, 3 wires system						
Brine flow rate	ℓ/min	1,242	1,546	1,706	2,132	2,452	2,958
Condenser water flow rate	ℓ/min	909	1,118	1,238	1,542	1,783	2,159
Compressor	Type	single screw compress					
	Motor output	kW	37×2	45×2	60×2	75×2	90×2
	Capacity control	%	100~25-0 continuous capacity control				
Evaporator type	Flooded shell and tube type						
Condenser type	shell and tube type						
Refrigerant	R-134a						
Pipe connections	Condenser water inlet/outlet	5B Flange (125A HG20593-97)			6B Flange (150A HG20593-97)		8B Flange (200A HG20593-97)
	Brine inlet/outlet	5B Flange (125A HG20593-97)			6B Flange (150A HG20593-97)		
	Safety valve	FPPT1/2					
Dimensions (H×W×D)	mm	1,765×1,160×3,400			1,830×1,320×3,600	2,000×1,400×3,960	2,060×1,680×4,000
Weight (Approx.)	kg	3,800	4,150	4,450	5,100	5,850	6,350
Operating weight (Approx.)	kg	4,000	4,400	4,700	5,400	6,200	6,800

Notes:

*1 Cooling capacity is based on the following conditions : Leaving brine temp.-5℃ (23.0°F), entering brine temp.-2℃ (28.4°F), leaving condenser water temp. 35℃ (95°F), entering condenser water temp. 30℃ (86°F).

*2 The following safety devices are equipped as standard. • High/low pressure switch. • Freeze-up protection thermostat. • Overcurrent relay for compressors. • Compressor thermal protector. • Reverse-phase protector. • Discharge gas overheat protector. • Fusible plug. • Safety valve. *3 This product is manufactured in China.

Option List

Model	ZUW100AY1	ZUW120AY1	ZUW150AY1	ZUW175AY1	ZUW200AY1	ZUW240AY1	ZUW280AY1	ZUW300AY1	ZUW350AY1	ZUW400AY1
IPU	DAM602B51/DAM602B52									
Dio unit	DEC102A51									
DIII Ai unit	DAM101A51									
Interface for use in LonWorks®	DMS504B51									
Interface for use in BACnet®	DMS502B51									
Central remote controller	DCS302CA61									
Unified ON/OFF controller	DCS301BA61									
Schedule timer	DST301BA61									
Upgrader adaptor	GD3-ZUW100A									

Warning



- Daikin Industries, Ltd.'s products are manufactured for export to numerous countries throughout the world. Daikin Industries, Ltd. does not have control over which products are exported to and used in a particular country. Prior to purchase, please therefore confirm with your local authorised importer, distributor and/or retailer whether this product conforms to the applicable standards, and is suitable for use, in the region where the product will be used. This statement does not purport to exclude, restrict or modify the application of any local legislation.
- Ask a qualified installer or contractor to install this product. Do not try to install the product yourself. Improper installation can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Use only those parts and accessories supplied or specified by Daikin. Ask a qualified installer or contractor to install those parts and accessories. Use of unauthorised parts and accessories or improper installation of parts and accessories can result in water or refrigerant leakage, electrical shock, fire or explosion.
- Read the User's Manual carefully before using this product. The User's Manual provides important safety instructions and warnings. Be sure to follow these instructions and warnings.

If you have any enquiries, please contact your local importer, distributor and/or retailer.

Cautions on product corrosion

1. Air conditioners should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the outdoor unit is to be installed close to the sea shore, direct exposure to the sea breeze should be avoided. If you need to install the outdoor unit close to the sea shore, contact your local distributor.

Daikin Water Chillers are of the self-contained type. This means that they are assembled, internally wired and charged with refrigerant at the factory for easy installation, only requiring external wiring and plumbing on site. They are compatible with Daikin's Air Handling and/or Fan Coil Units.

Organization:
DAIKIN INDUSTRIES, LTD.
AIR CONDITIONING MANUFACTURING
DIVISION



JMI-0107

Scope of Registration:
THE DESIGN/DEVELOPMENT AND
MANUFACTURE OF COMMERCIAL AIR
CONDITIONING, HEATING, COOLING,
REFRIGERATING EQUIPMENT,
COMMERCIAL HEATING EQUIPMENT,
RESIDENTIAL AIR CONDITIONING
EQUIPMENT, HEAT RECLAIM VENTILATION,
AIR CLEANING EQUIPMENT, MARINE TYPE
CONTAINER REFRIGERATION UNITS,
COMPRESSORS AND VALVES.



All of the Daikin Group's business
facilities and subsidiaries in Japan
are certified under the ISO 14001
international standard for
environment management.



Dealer

DAIKIN INDUSTRIES, LTD.

Head Office:
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka, 530-8323 Japan

Tokyo Office:
JR Shinagawa East Bldg., 2-18-1, Konan,
Minato-ku, Tokyo, 108-0075 Japan

http://www.daikin.com/global_ac/

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