

Water Cooled Packaged Unit

Cooling capacity: 16.5kW-205kW

Refrigerant: R410A





Product Overview

The water cooled packaged unit adopts the latest air conditioning technology of Daikin and the eco-friendly R410A refrigerant. With low energy consumption, the unit features flexible application, safe and reliable operation and intelligent control, and can be widely used in industrial and commercial scenarios such as plants, shopping malls, office buildings, schools, and exhibition centers.

The unit come in 13 models, with optional air plenum. Electric heater is also available.



Factory



Shopping mall

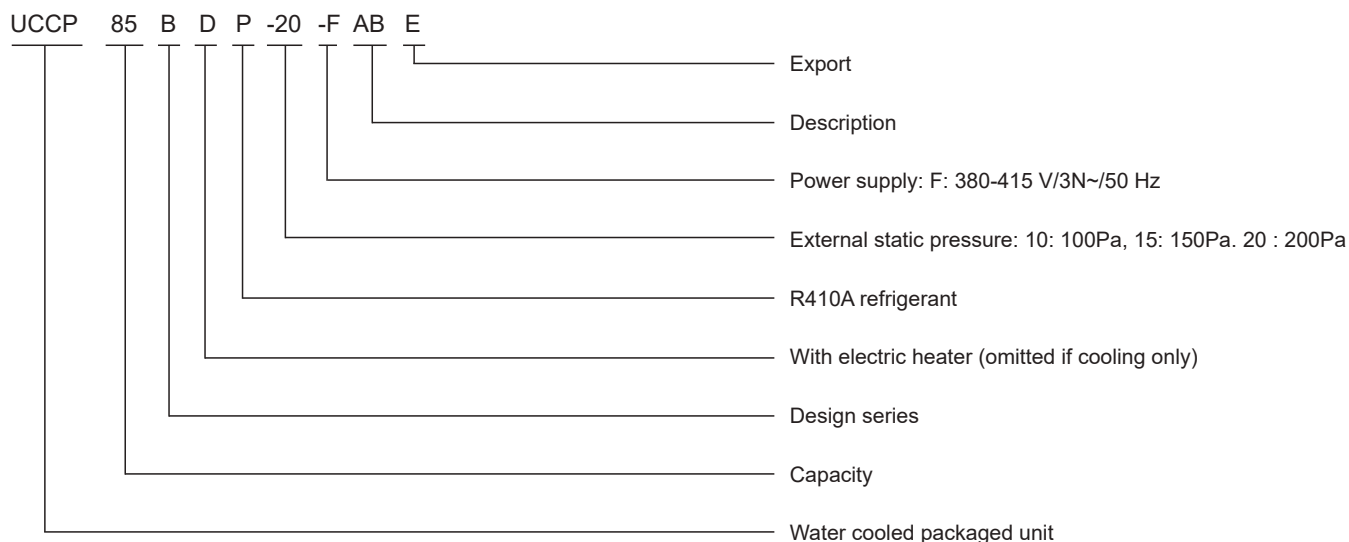


Office building



School

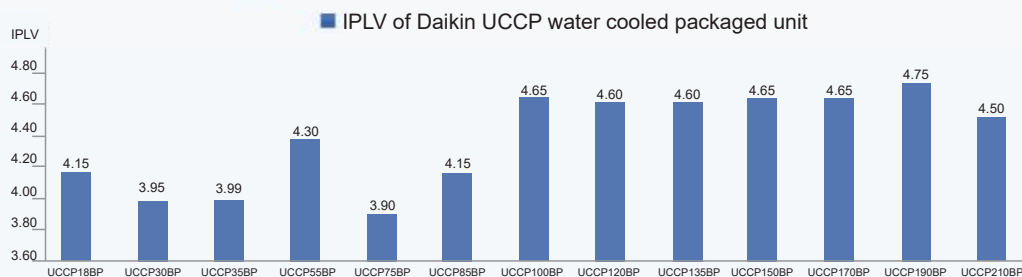
Nomenclature



Energy Efficiency

A breakthrough in energy efficiency

The unit adopts high-efficiency scroll compressor and innovative energy-saving technology, and boasts an IPLV of up to 4.75.



High partial-load efficiency

UCCP30BP and models above use multiple independent refrigeration systems, allowing 11-level energy regulation. The unit can adjust the capacity output by intelligently judging the system's load demand, thus enabling higher partial-load efficiency.



One key energy-saving

The unit has one-key Energy Saving mode. The energy efficiency is improved through increased evaporation temperature, and the operating costs are reduced significantly.



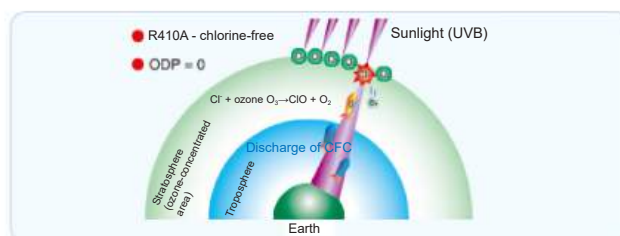
Eco-friendly refrigerant, no harm to ozone layer

The whole series uses eco-friendly R410A, with no damage to the ozone layer. Compared with those equipped with R22, this series boasts improved volume cooling capacity (41% increase), which effectively reduces the refrigerant amount, thereby reducing the refrigerant production and emission.

Refrigerant	R410A	R22
ODP	0	0.05
Volume cooling capacity	141%	100%

Note: ■ By definition, the Ozone Depletion Potential (ODP) for R11 is 1.0.

■ By definition, "Volume cooling capacity" in the table for R22 is 1.0.



Flexible Application

Multiple options

The inlet/outlet pipe connection direction of all models can be easily set to left or right on site (requiring on-site guidance from Daikin professionals).

All models are available with multiple levels of static pressure, while an optional air plenum is available for models UCCP18BP~UCCP75BP in all kinds of application.

Electric heater is optional.



Balanced operation

The unit automatically detects the accumulated running time of each compressor, and gives priority to start the compressor with lesser accumulated running time, so as to balance the compressors and improve the service life of the unit.



Convenient installation

The unit does not need a dedicated equipment room and can be placed flexibly according to the installation position of the user, thus lowering the initial investment costs for users.

The unit adopts integrated compressor, condenser, evaporator and other refrigeration system components. The installation of refrigerant loop is not required on site, and the unit can start after the cooling tower is connected and power is supplied.

Note: The model with an air plenum does not need to connect the air duct.



Convenient transportation

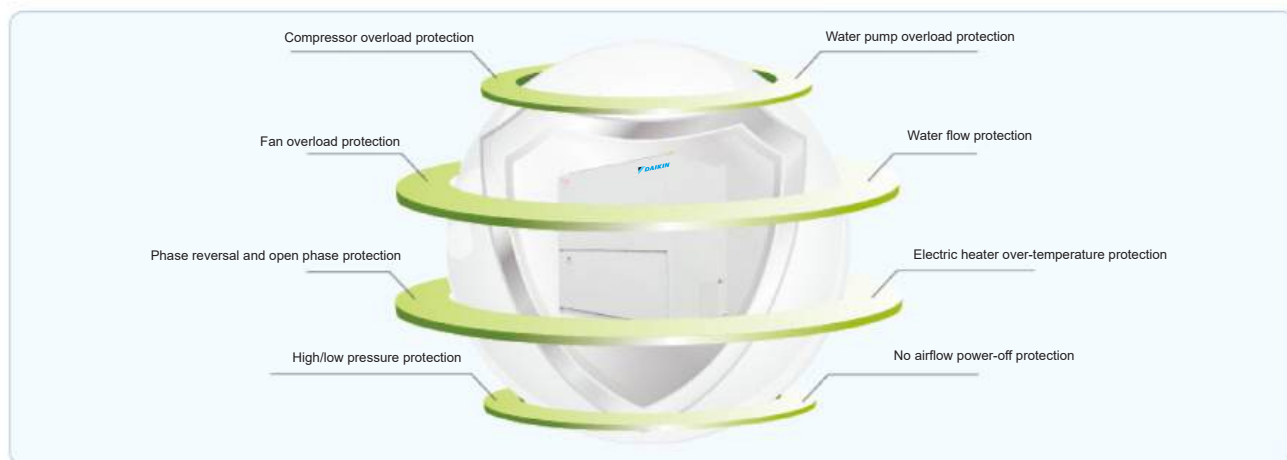
All units are equipped with plywood pallet. And models UCCP85BP~UCCP210BP are equipped with hoisting rings. It is easy to handle whether it is fork lift loading and unloading or hoisting operation at site.



Safe and Reliable

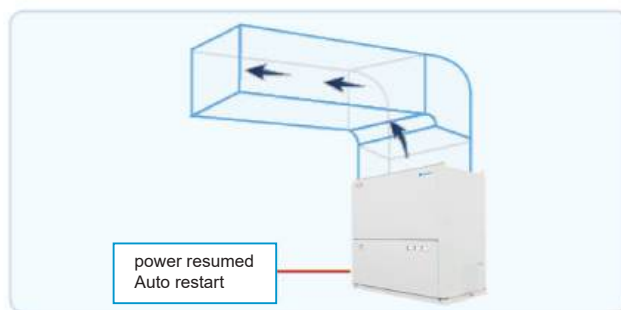
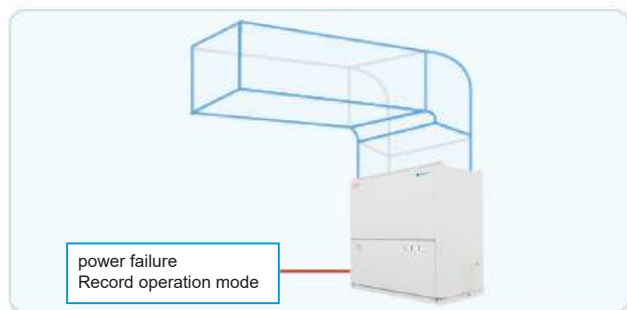
Comprehensive protection

UCCP units have eight protection functions, which can provide comprehensive protection for the unit and system.



Automatic startup after power restoration

When the air conditioning system encounters an unexpected power failure, it automatically records the operation mode before the power failure. After the power is resumed, the system automatically restores to the operation state prior to the power failure.



Corrosion resistance

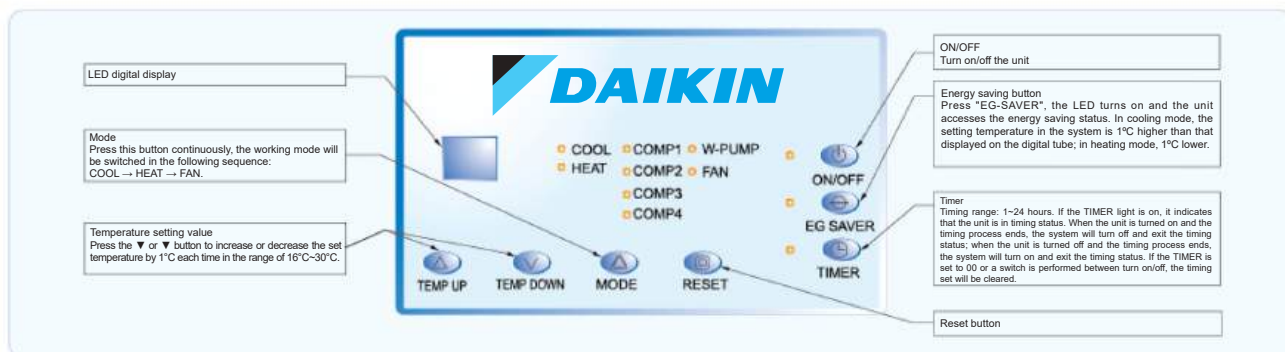
The unit casing adopts special anti-corrosion spray painting treatment. After degreasing, phosphating, spray and high-temperature baking in an automatic painting workshop, both sides of casing covering with polyester powder form a strong corrosion-resistant layer. The strict salt spray test ensures that the unit has strong corrosion resistance and longer service life.



Intelligent Control

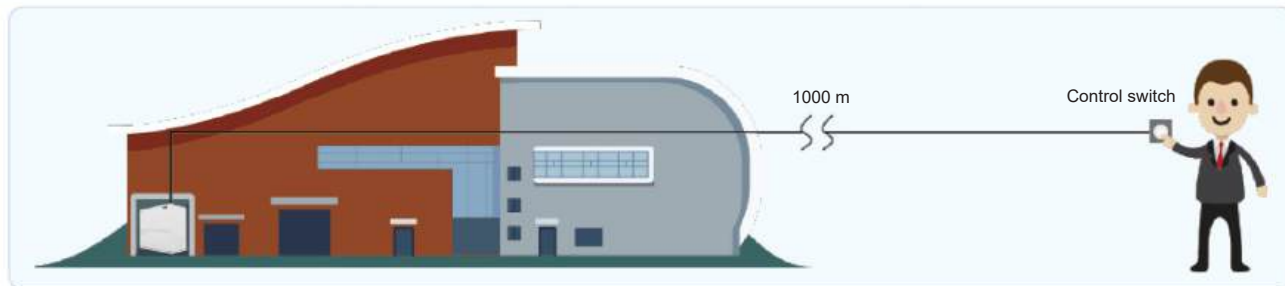
Microcomputer controller

The unit adopts user-friendly microcomputer control technology and is equipped with a controller with rich functions. The intelligent control system of the unit has many functions, such as mode switching, temperature control, energy saving mode, timing on/off, automatic compressor balance, compressor protection, and automatic fault identification. The control system is easy to operate and convenient for man-machine interaction.



Remote control

The unit supports a remote control range of 1000 m.



Free access to BAS

The unit is equipped with the standard RS485 building communication interface and complies with the standard Modbus communication protocol. It can be easily connected to the Building Automation System (BAS) for centralized control, thereby implementing intelligent management easily.



Specifications

Model			UCCP18BP	UCCP30BP	UCCP35BP	UCCP55BP	UCCP75BP	UCCP85BP
Nominal cooling capacity		W	16500	25000	32000	51000	72500	85000
Nominal cooling power input		W	4160	7100	9000	13000	20300	22500
Air flow		m³/h	2880	4200	6800	8000	11500	14000
Standard external static pressure		Pa	80(10)	100(10)	100(10)	150(10)	150(10)	200
Optional external static pressure		Pa	50/100	50/150	150/200	100/200	200/250	300/400
Sound pressure level		dB(A)	52	63	65	67	70	72
Capacity adjust stage		%	100,0	100,50,0	100,50,0	100,67,33,0	100,50,0	100,78,61,39,22,0
Power supply			380-415 V/3N~/50 Hz					
Refrigerant type			R410A					
Compressor	Type		Fully hermetic scroll type					
	Qty	sets	1	2	2	2	2	3
Condenser	Type		Tube in tube					Shell and tube
	Water flow	m³/h	3.55	5.38	6.88	10.97	15.59	18.28
	Water pressure drop	kPa	53	32	60	60	64	25
Evaporator	Type		Finned					
Throttle mode			Capillary tube					
Fan	Type		Centrifugal low-noise double-air-inlet					
	Drive method		V-belt transmission					
Filter	Dimensions	mm	797x625	877x625	917x795	1277x760	1597x805	527x653
	Qty	PCS	1	1	1	1	1	6
Outline dimension	Length	mm	1175	1175	1175	1585	1905	2000
	Width	mm	660	660	660	730	830	1055
	Height	mm	1600(1880)	1600(1880)	1880(2150)	1900(2160)	1985(2350)	1985
Weight of cooling only unit		kg	205(220)	260(275)	310(325)	440(470)	560(600)	770
Models of cooling only unit with electric heater			UCCP18BDP	UCCP30BDP	UCCP35BDP	UCCP55BDP	UCCP75BDP	UCCP85BDP
Electrical heating capacity		W	6000	9000	12000	21000	27000	36000
Heating power input		W	6370(6370)	10100(10100)	13500(14200)	23200(23900)	29200(30000)	40000
Weight of unit with electric heater		kg	210(225)	270(285)	325(340)	460(490)	585(625)	810

Note: ■ Test conditions of nominal cooling capacity: Indoor air DB temperature 27°C, WB temperature 19°C, inlet water temperature 30°C, rated water flow.
 ■ Nominal cooling input power excluding pump power.
 ■ Multiple static pressure options are available in the same model, and its parameters are consistent with those of the standard units.
 ■ Numbers in parentheses () are only applicable to models with the air plenum (10Pa static pressure), and some parameters are different from the standard units.
 ■ Models with the electric heater are equipped with built-in electric heating tube.

Specifications

Model			UCCP100BP	UCCP120BP	UCCP135BP	UCCP150BP	UCCP170BP	UCCP190BP	UCCP210BP
Nominal cooling capacity		W	95000	117000	135000	155000	168000	188000	205000
Nominal cooling power input		W	24500	27500	33500	38500	42500	47000	53000
Air flow		m³/h	17000	19800	21500	24600	26000	28800	33000
Standard external static pressure		Pa	250	250	300	300	350	350	350
Optional external static pressure		Pa	150/350	150/350	200/450	200/450	200/400/500	200/400/500	200/400/500
Sound pressure level		dB(A)	74	75	76	77	77	78	79
Capacity adjust stage		%	100, 78, 61, 39, 22, 0	100, 67, 33, 0	100, 86, 71, 57, 43, 29, 14, 0	100, 50, 0	100, 88, 55, 44, 11, 0	100, 80, 60, 40, 20, 0	100, 91, 82, 73, 63, 54, 45, 36, 27, 18, 9, 0
Power supply			380-415 V/3N~/50 Hz						
Refrigerant type			R410A						
Compressor	Type		Fully hermetic scroll type						
	Qty	sets	3	2	3	2	3	3	4
Condenser	Type		Shell and tube						
	Water flow	m³/h	20.43	25.16	29.03	33.33	36.12	40.42	44.08
	Water pressure drop	kPa	28	52	48	54	52	50	57
Evaporator	Type		Finned						
Throttle Mode			Capillary tube						
Fan	Type		Centrifugal low-noise double-air-inlet						
	Drive method		V-belt transmission						
Filter	Dimensions	mm	561x653	594x653	661x653	661x653	661x757	741x779	822x779
	Qty	PCS	6	6	6	6	6	6	6
Outline dimension	Length	mm	2000	2180	2380	2380	2380	2620	2860
	Width	mm	1055	1055	1055	1215	1215	1215	1215
	Height	mm	1985	1985	1985	1985	2060	2060	2060
Weight of cooling only unit		kg	805	835	925	1005	1155	1240	1395
Models of cooling only unit with electric heater			UCCP100BDP	UCCP120BDP	UCCP135BDP	UCCP150BDP	UCCP170BDP	-	-
Electrical heating capacity		W	42000	48000	48000	60000	60000	55000 (HD55A)	55000 (HD55A)
Heating power input		W	46000	53500	55500	67500	71000	66000	66000
Weight of unit with electric heater		kg	850	885	975	1060	1210	-	-

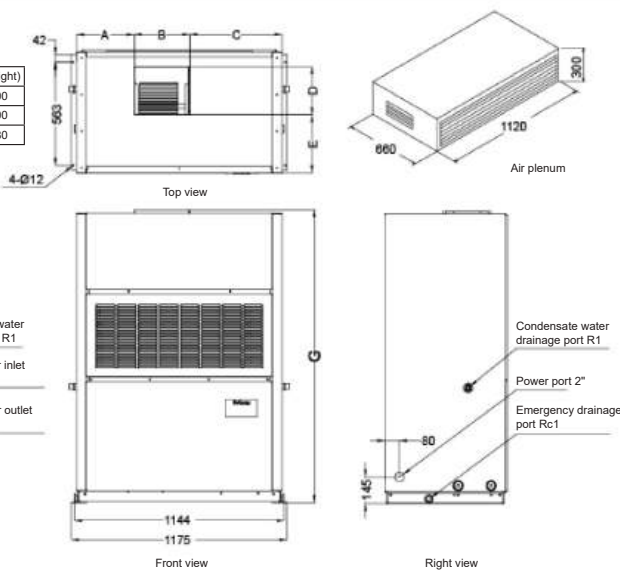
Note: ■ Test conditions of nominal cooling capacity: Indoor air DB temperature 27°C, WB temperature 19°C, inlet water temperature 30°C, rated water flow.

- Nominal cooling input power excluding pump power.
- Multiple static pressure options are available in the same model, and its parameters are consistent with those of the standard units.
- Numbers in parentheses () are only applicable to models with the air plenum (10Pa static pressure), and some parameters are different from the standard units.
- Models with the electric heater are equipped with built-in electric heating tube.
- For UCCP190BP and UCCP210BP models with the electric heater, an electric heater box of model HD55A is required.

Outline Dimension

UCCP18BP, UCCP30BP, UCCP35BP

Model	A	B	C	D	E	F	G (height)
UCCP18	313	304	503	264	315	180	1600
UCCP30	273	337	510	291	302	180	1600
UCCP35	180	401	539	343	275	200	1880

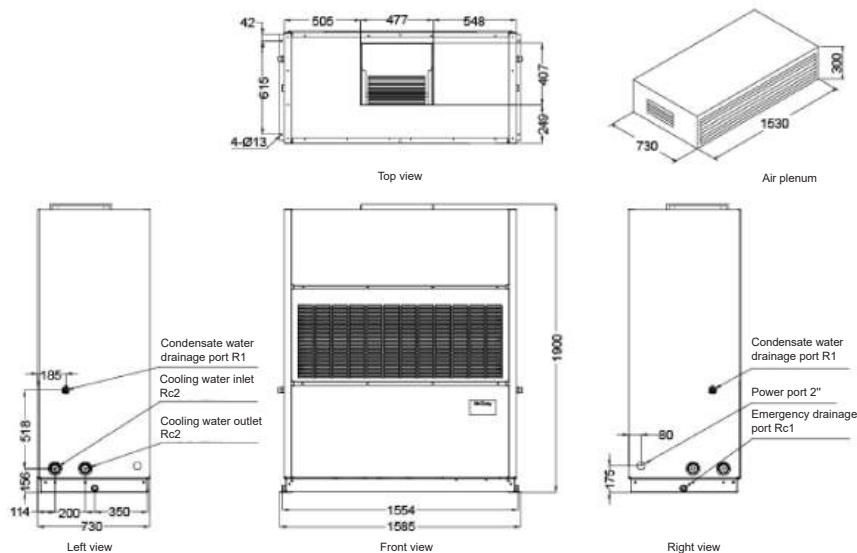


UCCP18BP, UCCP30BP	
Minimum installation spacing	
Front:	900
Rear:	900
Left:	900
Right:	900
Unit: mm	

UCCP35BP	
Minimum installation spacing	
Front:	1500
Rear:	900
Left:	900
Right:	900
Unit: mm	

Note: The dimension of model with an electric heater is the same as its corresponding cooling only unit.

UCCP55BP



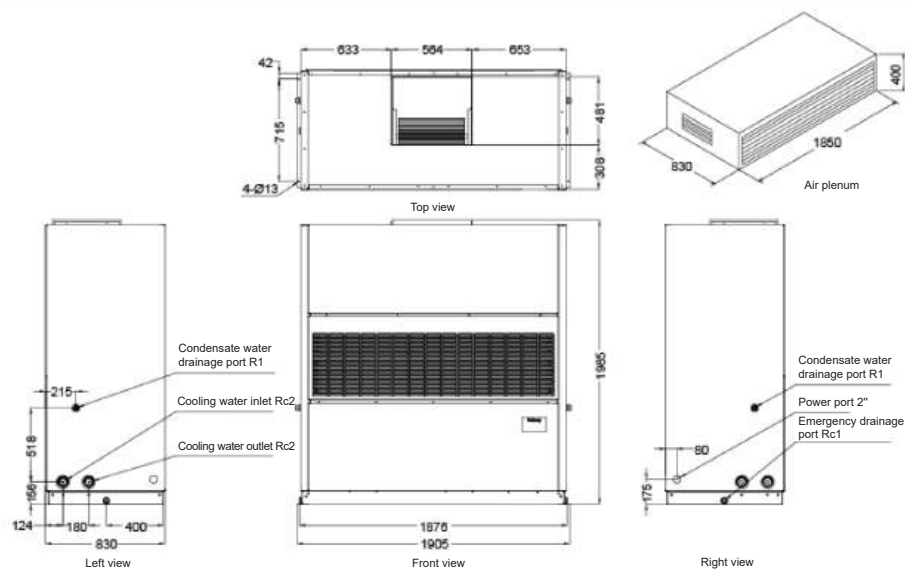
UCCP55BP	
Minimum installation spacing	
Front:	1500
Rear:	900
Left:	900
Right:	900
Unit: mm	

Note: The dimension of model with an electric heater is the same as its corresponding cooling only unit.



Outline Dimension

UCCP75BP



UCCP75BP

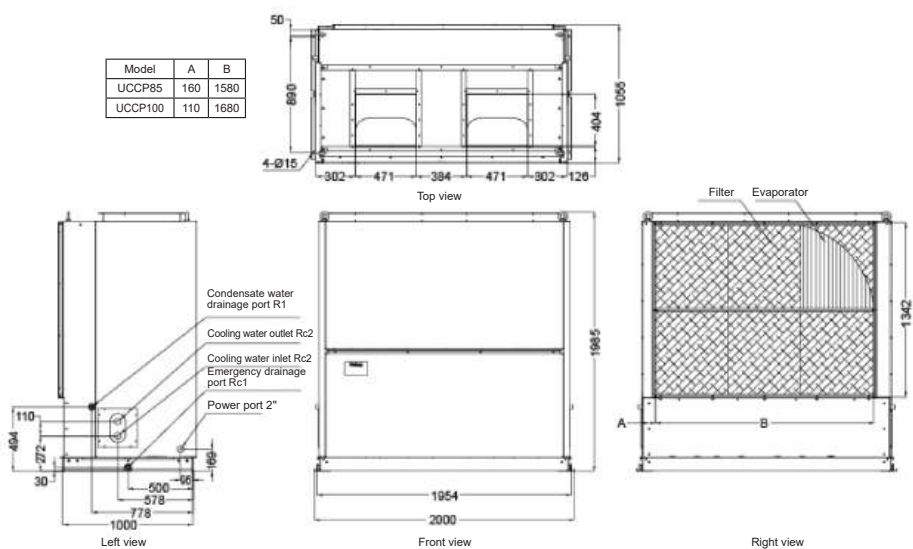
Minimum installation spacing

Front:	1500
Rear:	900
Left:	900
Right:	900

Unit: mm

Note: The dimension of model with an electric heater is the same as its corresponding cooling only unit.

UCCP85BP, UCCP100BP



UCCP85BP, UCCP100BP

Minimum installation spacing

Front:	900
Rear:	1500
Left:	900
Right:	900

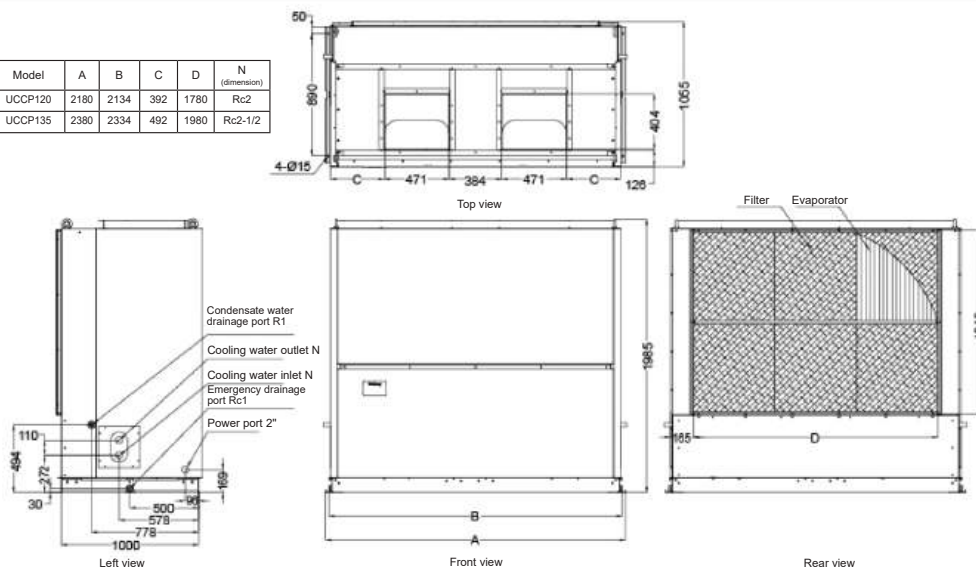
Unit: mm

Note: The dimension of model with an electric heater is the same as its corresponding cooling only unit.

Outline Dimension

UCCP120BP, UCCP135BP

Model	A	B	C	D	N (dimension)
UCCP120	2180	2134	392	1780	Rc2
UCCP135	2380	2334	492	1980	Rc2-1/2



UCCP120BP, UCCP135BP

Minimum installation spacing

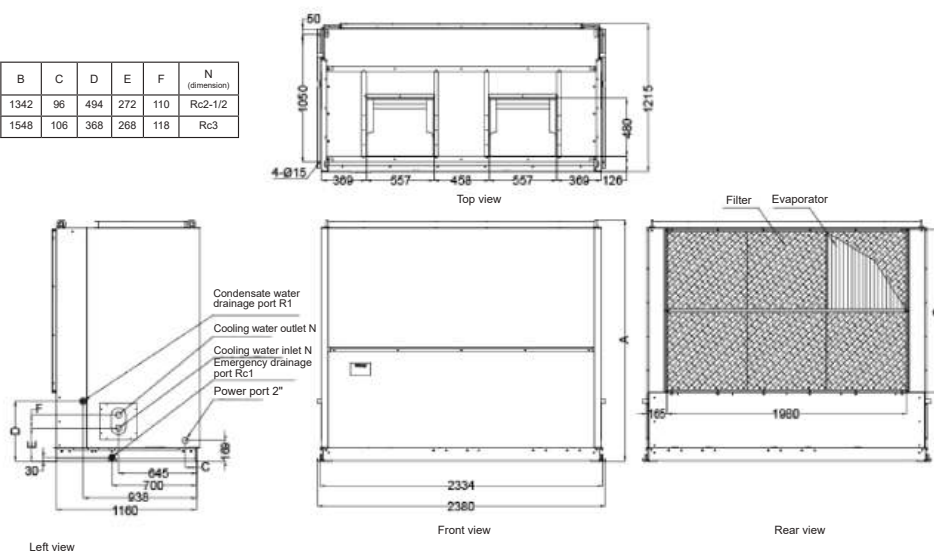
Front:	900
Rear:	1500
Left:	900
Right:	900

Unit: mm

Note: The dimension of model with an electric heater is the same as its corresponding cooling only unit.

UCCP150BP, UCCP170BP

Model	A (height)	B	C	D	E	F	N (dimension)
UCCP150	1985	1342	96	494	272	110	Rc2-1/2
UCCP170	2060	1548	106	368	268	118	Rc3



UCCP150BP, UCCP170BP

Minimum installation spacing

Front:	900
Rear:	1500
Left:	900
Right:	900

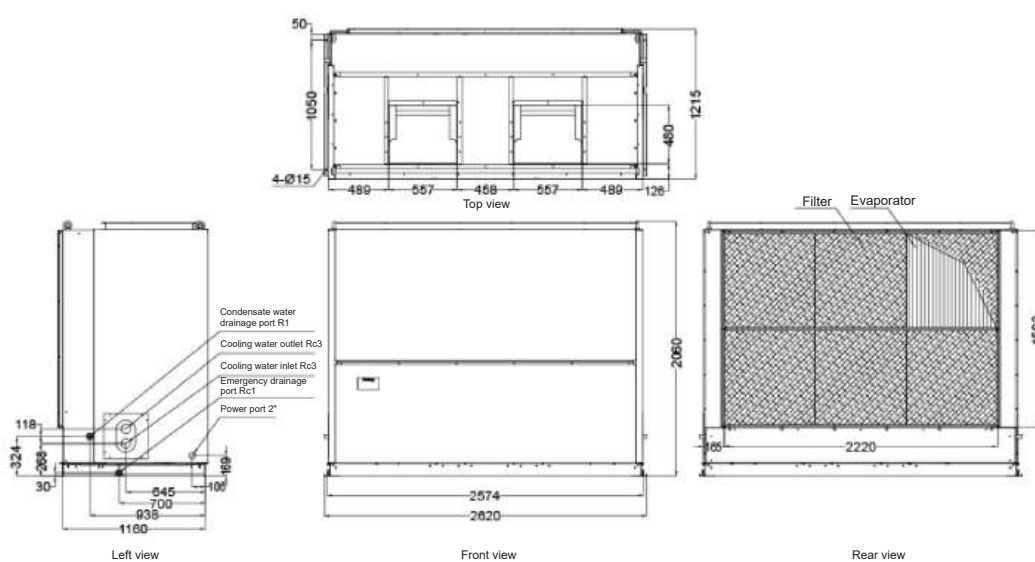
Unit: mm

Note: The dimension of model with an electric heater is the same as its corresponding cooling only unit.



Outline Dimension

UCCP190BP



UCCP190BP

Minimum installation spacing

Front: 900

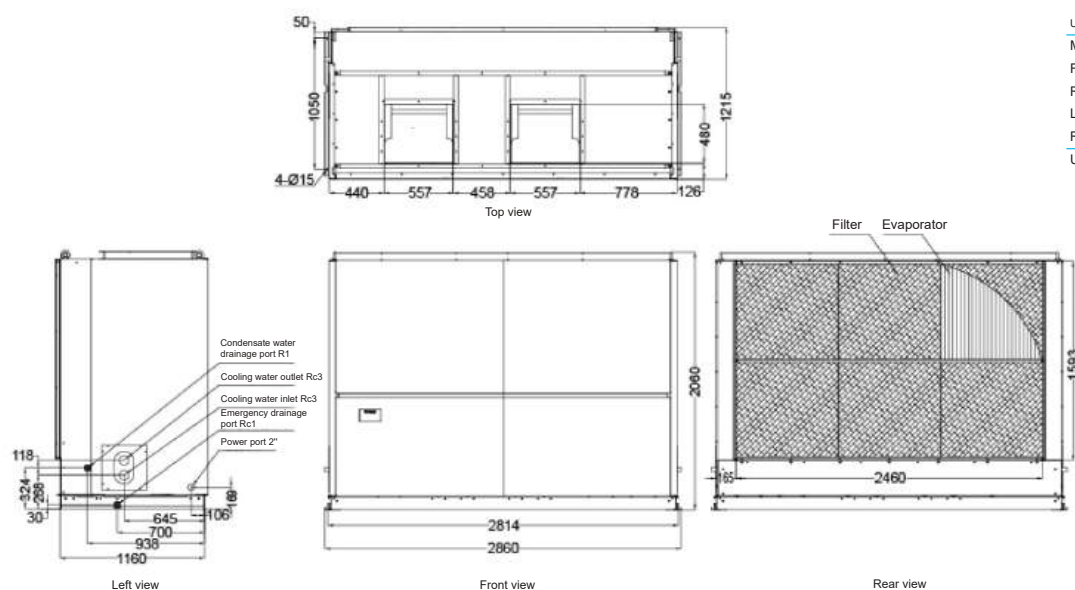
Rear: 1500

Left: 900

Right: 900

Unit: mm

UCCP210BP



UCCP210BP

Minimum installation spacing

Front: 900

Rear: 1500

Left: 900

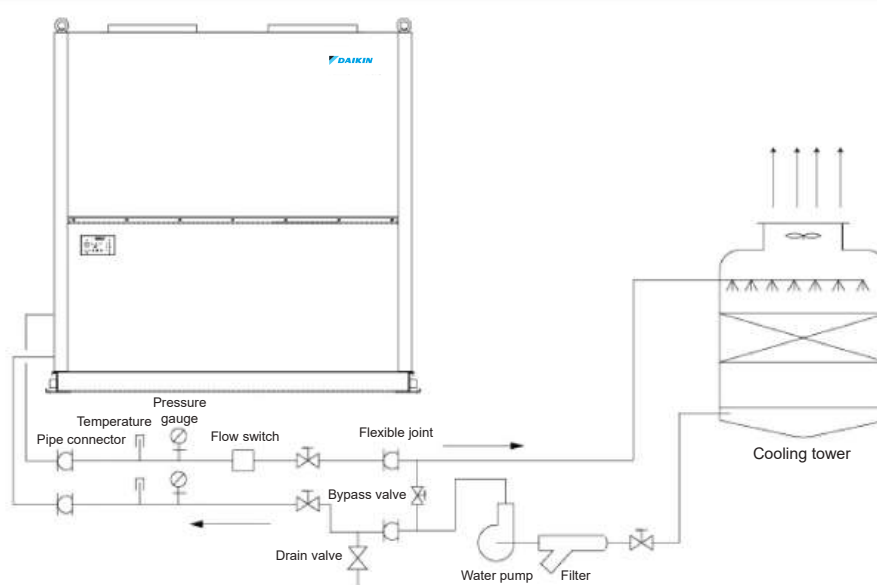
Right: 900

Unit: mm

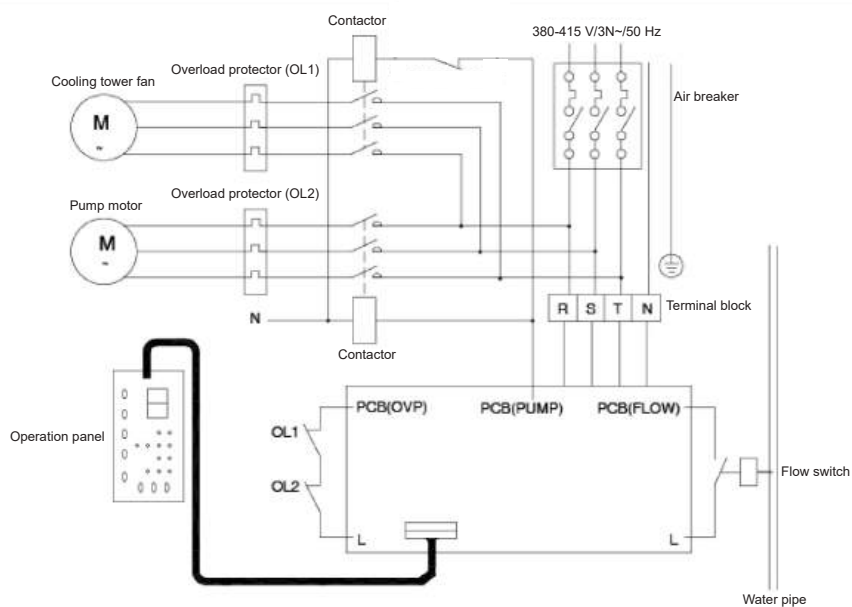
Installation



System Installation Connection



System Electrical Wiring





Installation position requirements

- Do not install the unit in outdoor open environment.
- Do not install the unit in a wet, corrosive environment and places with explosive gas.
- The unit must be installed on a level concrete base.
- Drainage, ventilation and maintenance spacing shall be considered during installation. Please refer to the external dimension drawing of the unit for the minimum installation spacing.
- During installation, a damping rubber cushion shall be placed between the concrete base and the unit to avoid vibration and noise.
- Install the unit in the area least sensitive to noise, such as a place near the staircase, elevator, toilet, etc. A better way is to use partitions between the unit and the air-conditioned room and seal the doors and windows.

Water pipe connection requirements

- All piping systems shall be installed in accordance with local regulations. Bends and up/down displacements must be minimized.
- To ensure a constant condensing pressure and condensing temperature, a three-way water flow control valve may be used to regulate the water flow of the condenser. The valve shall be set to maintain the minimum inlet water temperature at 16°C.
- To prevent low water temperatures, a temperature switch (the recommended set value is 27°C) can be installed to control the start and stop of the cooling tower fan to ensure that the water temperature is closer to the normal temperature.
- The condensate drain pipe is connected through the evaporator drain pan (the unit chassis is provided with a drain pan for emergency drainage only).
- In order to prevent the outside air from entering the evaporator and enhance the discharge of condensate water, a small segment of roundabout (U-bend) can be set at any position 51 mm below the drain pipe.
- Heat insulation layer must be applied to drain pipes to avoid condense water dripping.

Air duct connection

For the standard models of UCCP unit, the air outlet is provided with flanged outlets to facilitate the connection of air supply duct. It is advised to adopt an air outlet duct with the same size as the air outlet, and maintain a length at least three times the wind wheel diameter before this air outlet duct is connected to the bending duct or transition duct.

Minimum length:

Model	Impeller diameter (mm)	Minimum length (mm)
UCCP18BP	225	675
UCCP30BP	250	750
UCCP35BP	300	900
UCCP55BP	380	1140
UCCP75BP	460	1380
UCCP85/100/120/135BP	380	1140
UCCP150/170/190/210BP	460	1380

Note: ■ The model with air plenum cannot be connected to the air duct for air supply, otherwise the machine may be damaged due to insufficient air flow.

- The model with an electric heater is the same as its corresponding cooling only unit.
- The unit adopts the "free return air" design. The equipment room serves as the return air room. If the air is returned from the duct to the unit, there must be a flexible connection duct.
- The air duct shall be insulated, and the insulating layer shall be provided with moisture-proof layer to prevent external vapor.

Electric Parameters

Operating limit

The UCCP unit is connected to single power supply and no additional control power source is required. The power supply of the unit uses 380-415 V/3N~/50 Hz and the control power source uses 220-240 V~/50 Hz.

Power supply		Condenser inlet water	Evaporator inlet air	
Compressor	Fan	Temperature range (°C)	DB temperature (°C)	WB temperature (°C)
380-415 V/3N~/50 Hz	380-415 V/3N~/50 Hz	16~40	16~32	13~24

Electrical parameters

Model			UCCP18BP	UCCP30BP	UCCP35BP	UCCP55BP	UCCP75BP	UCCP85BP
Power supply			380-415 V/3N~/50 Hz					
Power cord	Main line (R/S/T)	Sectional area (mm ²)	4	6	6	10	16	16
		Quantity	3					
	Null line	Sectional area (mm ²)	4	6	6	10	16	16
		Quantity	1					
	Ground Line	Sectional area (mm ²)	4	6	6	10	16	16
		Quantity	1					

Model			UCCP100BP	UCCP120BP	UCCP135BP	UCCP150BP	UCCP170BP	UCCP190BP	UCCP210BP
Power supply			380-415 V/3N~/50 Hz						
Power cord	Main line (R/S/T)	Sectional area (mm ²)	16	25	35	50	50	50	50
		Quantity	3						
	Null line	Sectional area (mm ²)	16	16	25	35	35	35	35
		Quantity	1						
	Ground Line	Sectional area (mm ²)	16	16	16	25	25	25	25
		Quantity	1						

Model			UCCP18BDP	UCCP30BDP	UCCP35BDP	UCCP55BDP	UCCP75BDP	UCCP85BDP
Power supply			380-415 V/3N~/50 Hz					
Power cord	Main line (R/S/T)	Sectional area (mm ²)	4	6	6	10	16	16
		Quantity	3					
	Null line	Sectional area (mm ²)	4	6	6	10	16	16
		Quantity	1					
	Ground Line	Sectional area (mm ²)	4	6	6	10	16	16
		Quantity	1					

Model			UCCP100BDP	UCCP120BDP	UCCP135BDP	UCCP150BDP	UCCP170BDP
Power supply			380-415 V/3N~/50 Hz				
Power cord	Main line (R/S/T)	Sectional area (mm ²)	25	35	35	50	50
		Quantity	3				
	Null line	Sectional area (mm ²)	16	25	25	35	35
		Quantity	1				
	Ground Line	Sectional area (mm ²)	16	16	16	25	25
		Quantity	1				

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 authorized 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 unauthorized 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. The units should not be installed in areas where corrosive gases, such as acid gas or alkaline gas, are produced.
2. If the 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 unit close to the sea shore, contact your local distributor.

CÔNG TY CỔ PHẦN DAIKIN AIR CONDITIONING (VIETNAM)**VĂN PHÒNG CHÍNH**

Tầng 12, tòa nhà Nam Á, 201-203 Cách Mạng Tháng 8, P.4, Q.3, TP. Hồ Chí Minh, Tel: (028) 62 504 888

CHI NHÁNH HÀ NỘI

Tầng 12, tòa nhà Ocean Park Tower,
1 Đào Duy Anh, Q. Đống Đa, Hà Nội
Tel: (024) 3565 7677

CHI NHÁNH CẦN THƠ

37-38 Võ Nguyên Giáp, Khu dân cư Phú An,
P. Phú Thứ, Q. Cái Răng, TP. Cần Thơ
Tel: (0292) 626 9977

CHI NHÁNH HẢI PHÒNG

Số 7 Lê Bá đường Lê Hồng Phong,
P. Đồng Khê, Q. Ngô Quyền, TP. Hải Phòng
Tel: (0225) 383 2900

CHI NHÁNH KHÁNH HÒA

Tầng 8, tòa nhà VCN, Số 2 Tổ Hữu,
Khu đô thị VCN, P. Phước Hải, TP. Nha Trang
Tel: (0258) 625 8158

CHI NHÁNH ĐÀ NẴNG

Tầng 12, tòa nhà PVcomBank, Lô A2.1, Đường 30/4,
P. Hòa Cường Bắc, Q. Hải Châu, TP. Đà Nẵng
Tel: (0236) 362 4250

CHI NHÁNH NGHỆ AN

Số 2 Nguyễn Sỹ Sách, P. Hưng Bình, TP. Vinh
Tel: (0238) 872 7785

**DỊCH VỤ SAU BÁN HÀNG****HOTLINE****1800 6777****1800 1577**

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DaikinVietnam



www.daikin.com.vn