

# EKWP-B



## EKWP-B Series Water-cooled Cabinet Units

Model: EKWP35B~EKWP205B  
Cooling capacity: 35-205kW

## Overview

EKWP-B series water-cooled packaged units are a new generation of modular air-conditioning units featuring the state-of-art EK air conditioner designs. They have complete models and a wide application range. Some models are equipped with a static pressure box and can be used for direct air supply. EKWP series units are widely used in marketplaces, hotels, schools, banks, post offices and industrial processes. Electric heaters are available for all models to serve heating purposes.



## Model Description

**EKWP 110 B D 0-T 25-F AA**

1 2 3 4 5 6 7 8 9

1.	EKWP	EKWP Series Water-cooled Cabinet Units
2.	110	Cooling capacity code
3.	B	Design S/N
4.	D	Model with electric heater; omitted in cooling-only units
5.	0	Refrigerant code: 0: R407C;1: R410A; R22 by default.
6.	T	Condenser pressure gauge code: T: Sleeve tube without pressure gauge; S: Hub tube without pressure gauge; G: Sleeve tube with pressure gauge; Q: Hub tube with pressure gauge;
7.	25	Static pressure code 25: the external static pressure is 250 Pa, so on and so forth. P: Model with sway static pressure box J: Model with ball-nozzle static pressure box
8.	F	Power supply features: F: 380V/3N~/50HZ
9.	AA	Detailed description on product specifications

## Micro-computer Control

EKWP-B water-cooled packaged units are equipped with a complete suite of smart control functions.

- ◆ Four operation modes: COOL/HEAT/FAN/COOL&HEAT, namely cooling/heating/air supply/auto (cooling & heating) (Cooling-only units only have a COOL mode. All features are disabled in the HEAT mode).
- ◆ Temperature setting range (TEMP): 16°C~30°C.
- ◆ Timer for ON/OFF (TIMER): 1~24 hours
- ◆ Energy saver (EG-SAVER)
- ◆ Auto failure detection and alarm  
The LED digital display shows the temperature setting, timed on/off or alarms.
- ◆ Protective time lag for compressor startup/shutdown
- ◆ Auto load-balancing for compressors:  
The unit controller automatically records the working time of each compressor. Compressors that worked fewer hours have a higher priority for startup, while compressor that worked more hours have a higher priority for shutdown.

## Unit Features

- All units are equipped with compliant scroll compressors of the latest design, making the units more reliable, stable, comfort and energy-efficient compared to units using traditional compressors.
- EKWP35B and later models have multiple independent cooling systems, which facilitate capacity modulation and help saving more energy.
- Full series models can be equipped with optional electric heaters.
- Controlled by micro-computers, the units are easier to operate and run more smoothly.

## Remote Control

The units can be turned on/off within a 1000-meter range.

## Centralized Remote Control and Smart BMS Control

Using a special data converter, you can apply centralized network control over 32 x 32 (1024) water-cooled packaged units within a 1000-meter range. In addition, these units can also be networked into a BMS (Modbus protocol) using special data converters and gateways.

## Sleeve tube series: (EKWP35B~EKWP155B)

Model		EKWP35B	EKWP55B	EKWP70B	EKWP80B	EKWP110B	EKWP125B	EKWP155B	
Cooling capacity	W	35000	49000	68000	78000	110000	125000	155000	
Air flow	m <sup>3</sup> /h	7000	8500	11000	14000	18000	20000	25000	
External static pressure	Pa	100(0)	150(0)	150(0)	200	250	250	250	
Sound	dB(A)	65	67	70	72	73	74	75	
Cooling capacity modulation range	%	100,50,0	100,67,33,0	100,75,50,25,0	100,75,50,25,0	100,80,60,40,20,0	100,83,67,50,33,17,0	100,86,71,57,43,29,14,0	
Power supply		380V/3N~/50Hz							
Total input power for cooling	kW	9.5(9)	13.2(12.5)	18.3(17.1)	18.5	24.8	28.5	36.8	
Refrigerant model		R22							
Compressor	Type	High-efficiency fully hermetic volute compressor							
	Qty.	Set	2	3	4	4	5	6	7
Condenser	Type	High-efficiency sleeve tube coaxial heat exchanger with multiple threads							
	Water flow		7.7	10.7	14.8	16.6	23.2	26.4	33.0
	Water pressure drop		55	65	67	55	71	58	66
Evaporator	Type	Shutter-type hyperbolic fins made from mechanically expanded quality copper tubes specially designed for air conditioners							
	Flow control		Capillary						
Fan	Type	Low-noise centrifugal fan with dual air inlets							
	Transmission		V-belt transmission						
Air filter	Size	mm	1025X775	1466x725	1656x825	529x660	529x660	595x686	661x686
	Qty.	Piece	1	1	1	6	6	6	6
Dimensions	Length	mm	1280	1724	1924	2002	2002	2222	2422
	Width	mm	678	737	837	1061	1061	1244	1244
	Height	mm	1903(2173)	1922(2196)	2036(2405)	1990	1990	2069	2069
Weight	Cooling only		280(300)	455(485)	610(650)	720	930	1010	1235
Models for cooling only units with electric heaters			EKWP35BD	EKWP55BD	EKWP70BD	EKWP80BD	EKWP110BD	EKWP125BD	EKWP155BD
Electric heating capacity	W		12000	21000	27000	36000	42000	48000	60000
Weight of models with electric heaters	kg		293(313)	473(503)	632(672)	760	960	1060	1265

### Note:

- Working conditions for cooling capacity test:  
Temperature of indoor dry/wet bulb: 27°C/19°C; temperature of inlet/outlet water temperature: 30°C/35°C.
- Parameters within brackets ( ) are applicable for units with a sway static pressure box.
- The external static pressure refers to the static pressure under nominal air flow.  
The static pressure varies based on customer requirement. The input power of a unit may also change. For details, please refer to the nameplate on a unit.
- The performance and sound level of a unit may change as installation site and parameters such as air flow, static pressure, temperature of return air, water flow and temperature of inlet water change.
- Electric heating units are equipped with a built-in electric heating pipe.
- Specification parameters are subject to change due to product improvement without further notice. Please refer to the nameplate and label on a unit.

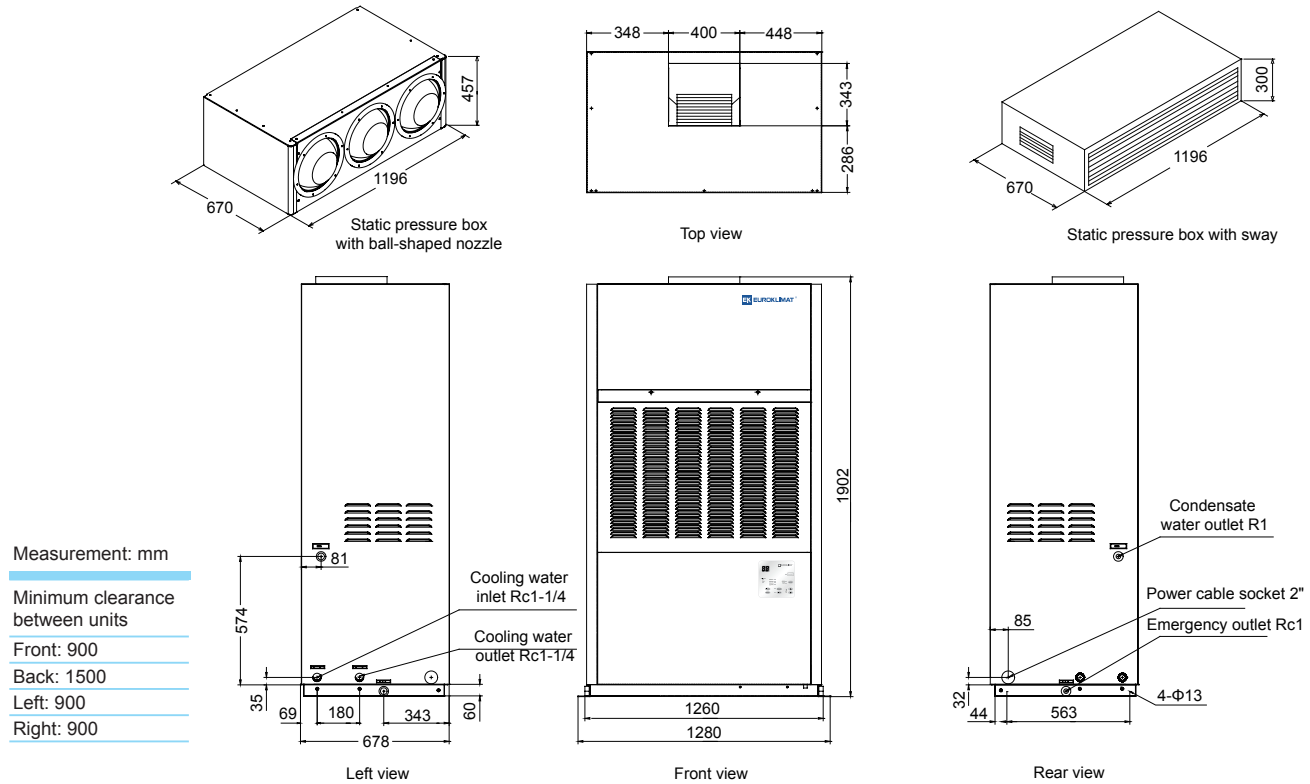
## Hub tube series: (EKWP75B~EKWP205B)

Model		EKWP75B	EKWP85B	EKWP100B	EKWP115B	EKWP125B	EKWP135B	EKWP145B	EKWP165B	EKWP185B	EKWP205B	
Cooling capacity	W	75000	85000	100000	115000	125000	135000	145000	165000	185000	205000	
Air flow	m <sup>3</sup> /h	14000	15000	17000	20000	22000	22000	24000	26000	29000	33000	
External static pressure	Pa	150	150	200	200	200	200	200	250	300	300	
Sound	dB(A)	70	70	71	72	72	73	73	74	74	75	
Cooling capacity modulation range	%	100,50,0		100,80,60,40,20,0		100,67,33,0		100,86,71,57,43,29,14,0		100,75,50,25,0	100,78,67,56,44,33,22,0	100,80,60,40,20,0
Power supply		380V/3N~/50Hz										
Total input power for cooling	kW	18.6	19.5	23	28.5	29.8	31.5	33	38.7	46.2	50.5	
Refrigerant model		R22										
Compressor	Type	High-efficiency fully hermetic volute compressor										
	Qty.	Set	2	2	3	3	3	4	4	4	5	5
Condenser	Type	High-efficiency sleeve tube coaxial heat exchanger with multiple threads										
	Water flow		16.1	18.0	21.2	24.7	26.6	28.6	30.6	35.0	39.8	43.9
Evaporator	Water pressure drop		17	22	22	20	23	22	24	39	38	50
	Type	Shutter-type hyperbolic fins made from mechanically expanded quality copper tubes specially designed for air conditioners										
Fan	Flow control	Capillary										
Fan	Type	Low-noise centrifugal fan with dual air inlets										
	Transmission	V-belt transmission										
Air filter	Size	mm	680x470	680x470	680x520	680x520	680x520	686x661	686x661	680x650	680x733	680x797
	Qty.	Piece	6	6	6	6	6	6	6	6	6	6
Dimensions	Length	mm	1850	1850	2000	2000	2000	2220	2220	2410	2660	2850
	Width	mm	1000	1000	1000	1000	1000	1080	1080	1173	1173	1173
	Height	mm	1935	1935	1935	1935	1935	1935	1935	1928	1928	1928
Weight	Cooling only		690	710	840	895	895	1060	1080	1160	1250	1350
Models for cooling only units with electric heaters		EKWP 75BD	EKWP 85BD	EKWP 100BD	EKWP 115BD	EKWP 125BD	EKWP 135BD	EKWP 145BD	EKWP 165BD	EKWP 185BD	EKWP 205BD	
Electric heating capacity	W	36	36	42	48	48	48	60	60	60	60	
Weight of models with electric heaters	kg	730	750	885	945	945	1110	1150	1230	1320	1420	

### Note:

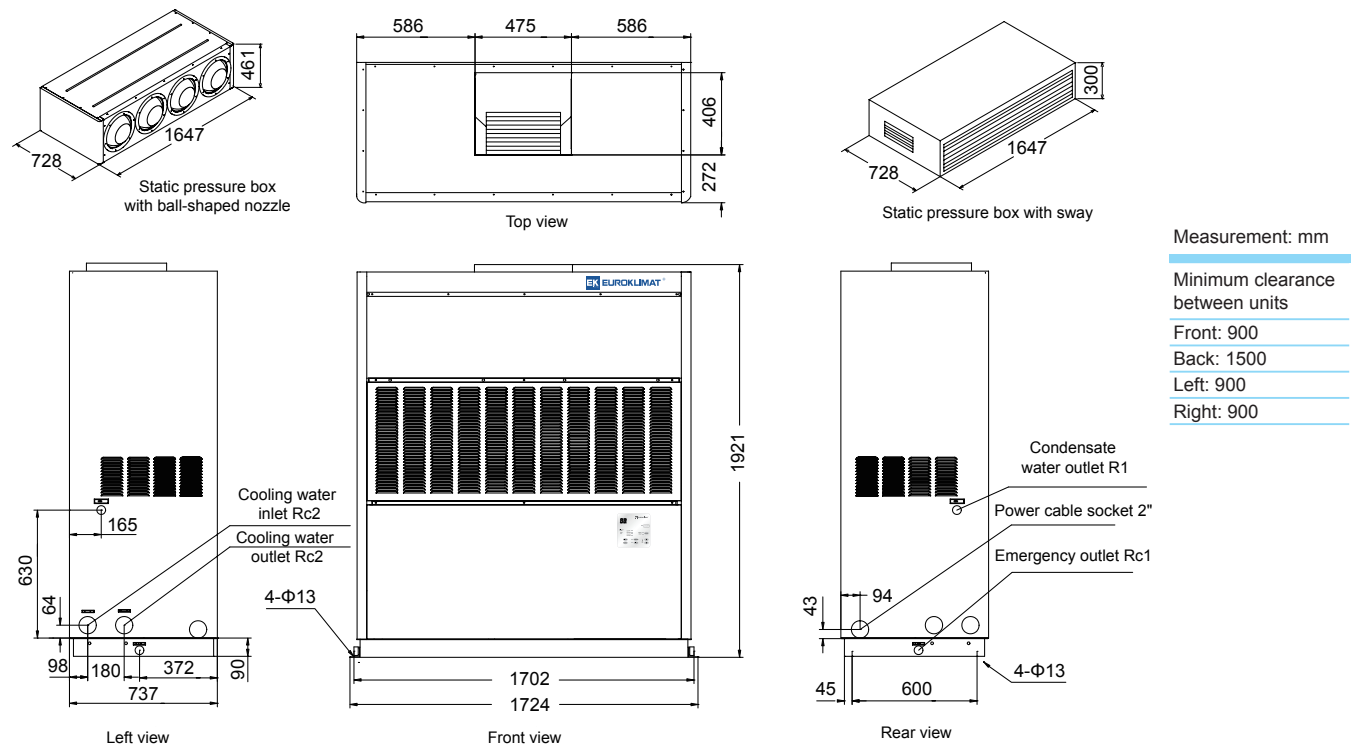
- Working conditions for cooling capacity test:  
Temperature of indoor dry/wet bulb: 27°C/19°C; temperature of inlet/outlet water temperature: 30°C/35°C.
- Parameters within brackets ( ) are applicable for units with a sway static pressure box.
- The external static pressure refers to the static pressure under nominal air flow.  
The static pressure varies based on customer requirement. The input power of a unit may also change. For details, please refer to the nameplate on a unit.
- The performance and sound level of a unit may change as installation site and parameters such as air flow, static pressure, temperature of return air, water flow and temperature of inlet water change.
- Electric heating units are equipped with a built-in electric heating pipe.
- Specification parameters are subject to change due to product improvement without further notice. Please refer to the nameplate and label on a unit.

**Model: EKWP35B (sleeve tube series)**



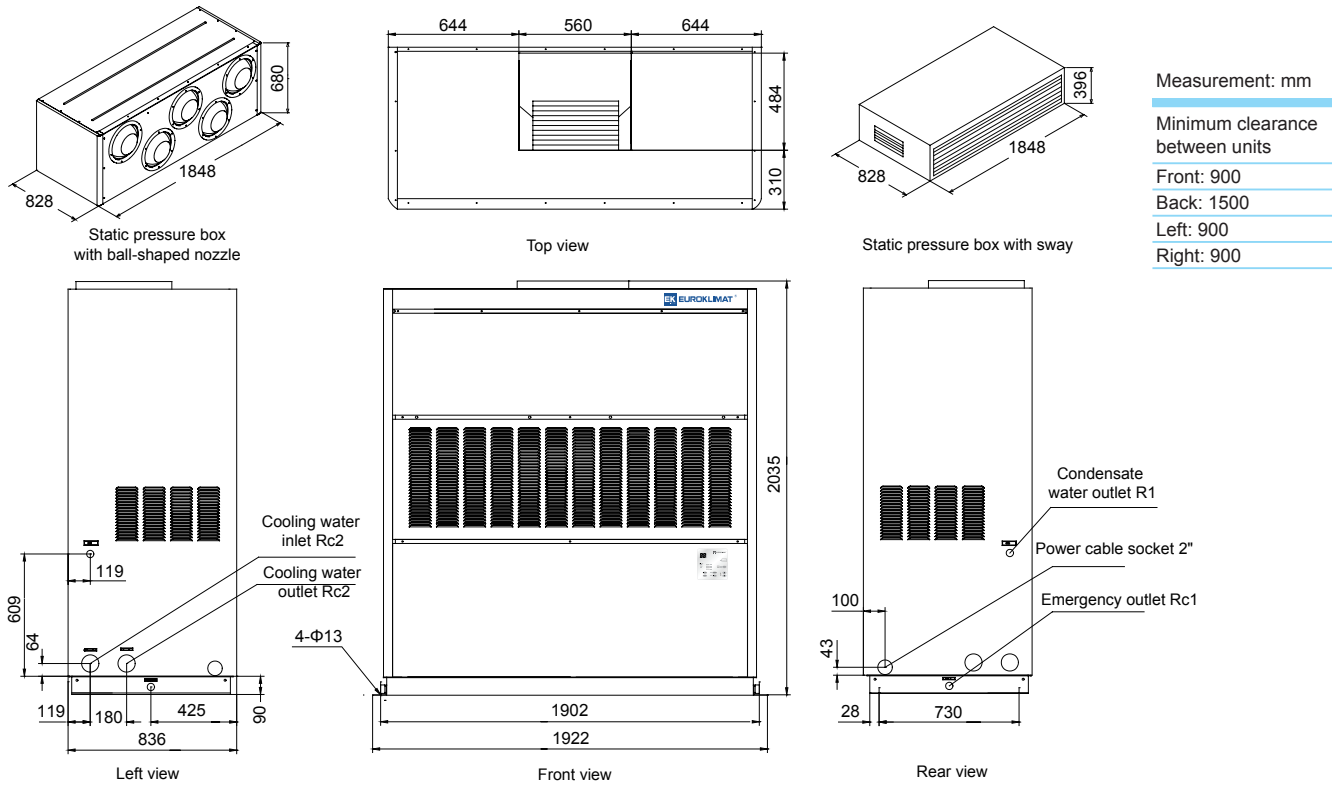
Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

**Model: EKWP55B (sleeve tube series)**



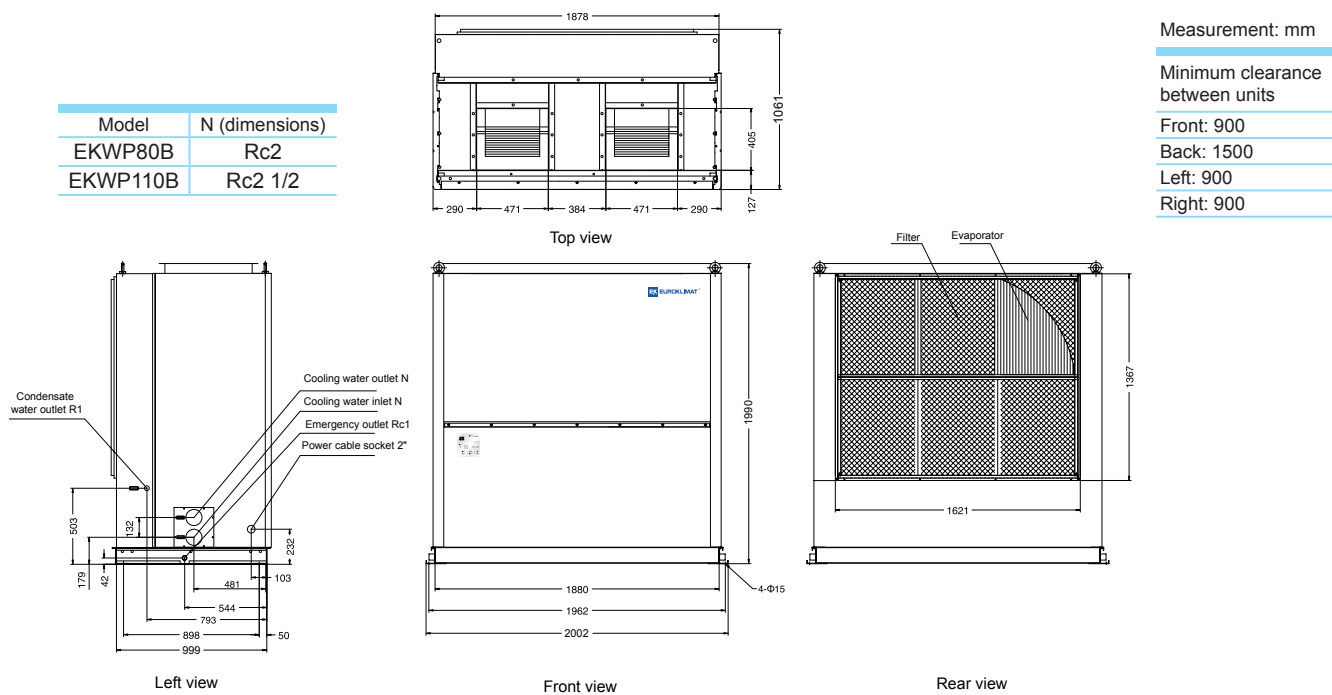
Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

**Model: EKWP70B (sleeve tube series)**



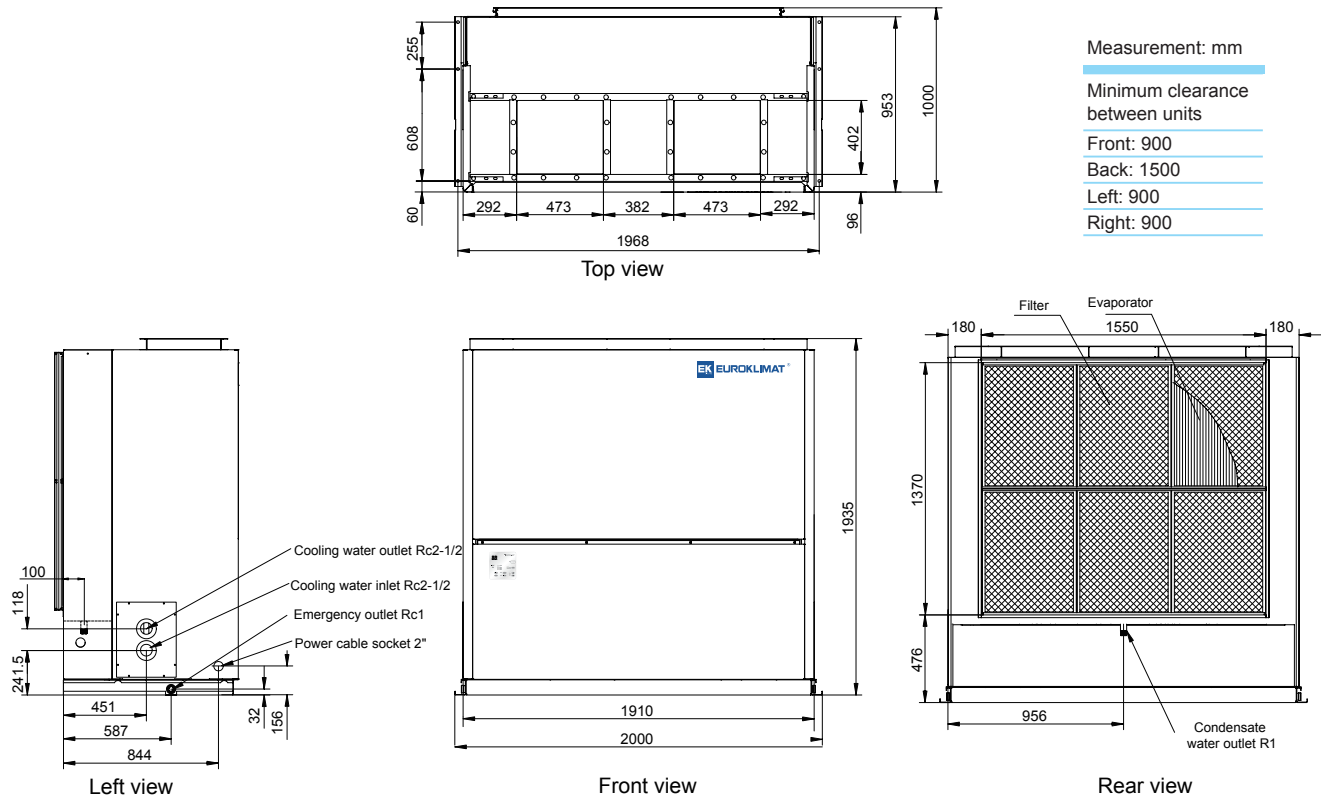
Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

**Model: EKWP80B\ EKWP110B (sleeve tube series)**



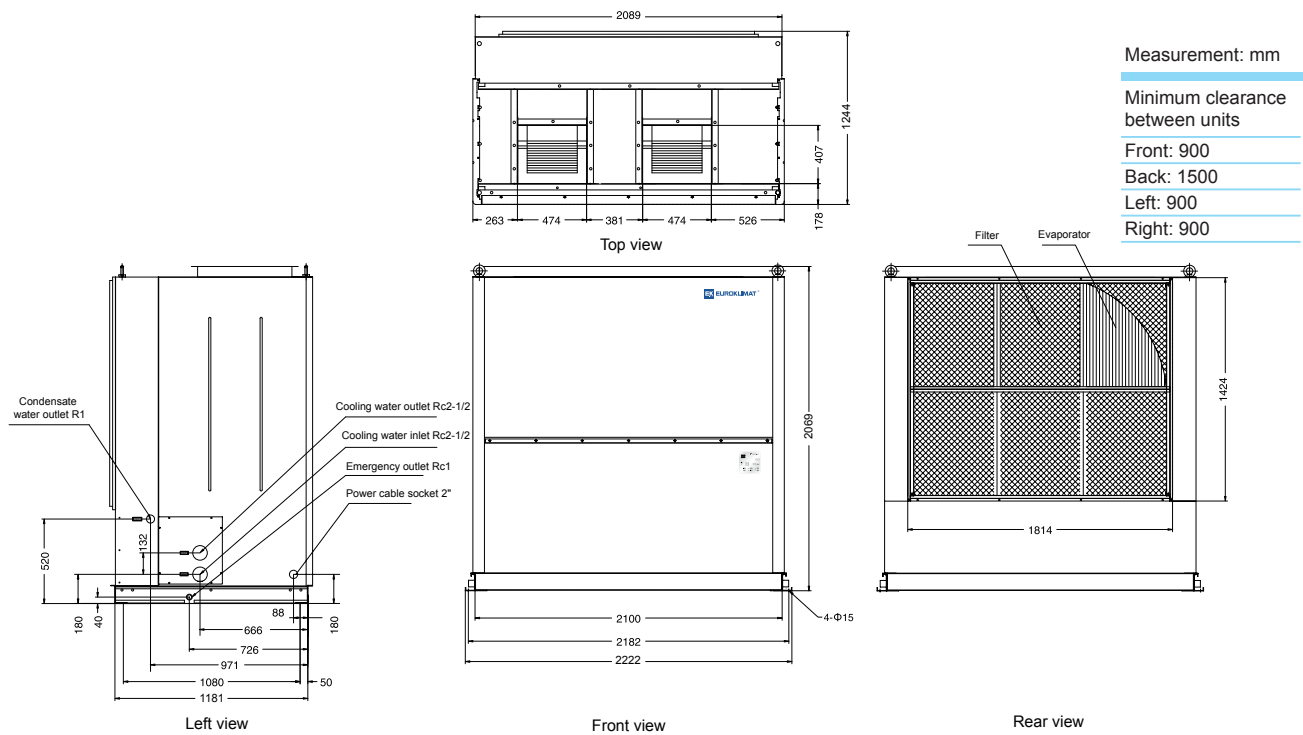
Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

**Model: EKWP100B/EKWP115B/125B (hub tube series)**



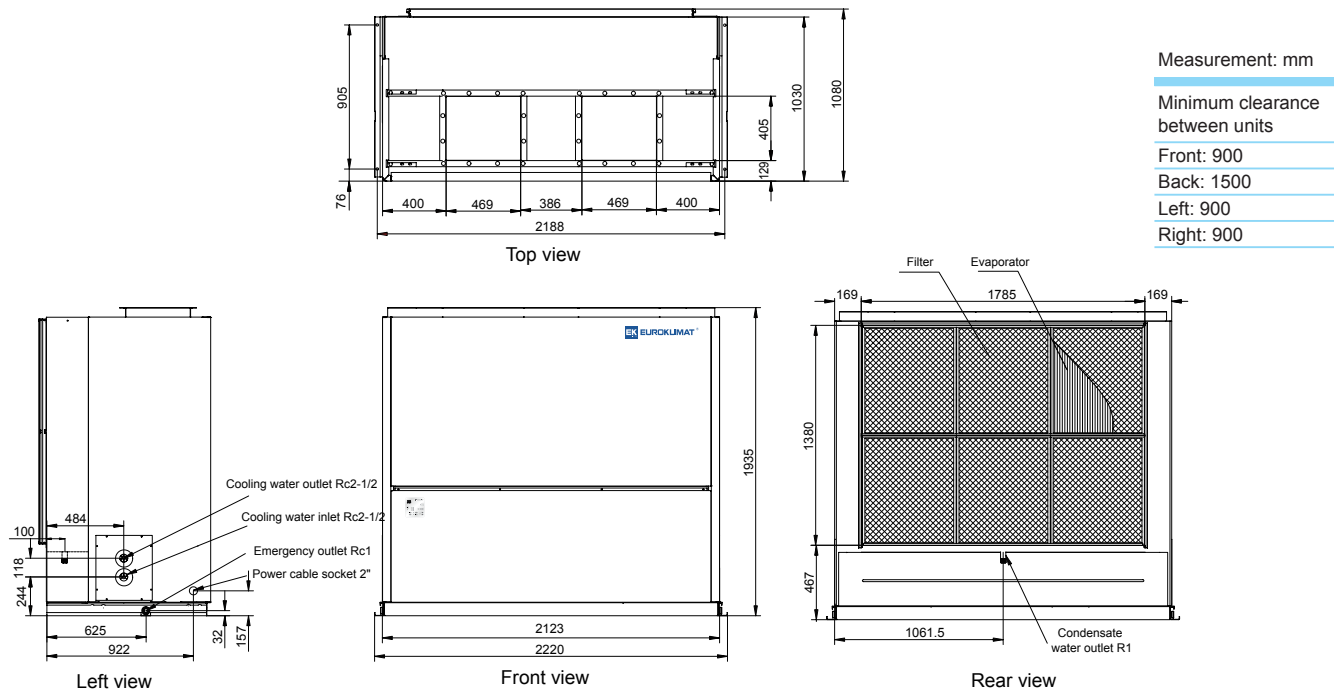
Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

**Model: EKWP125B (sleeve tube series)**



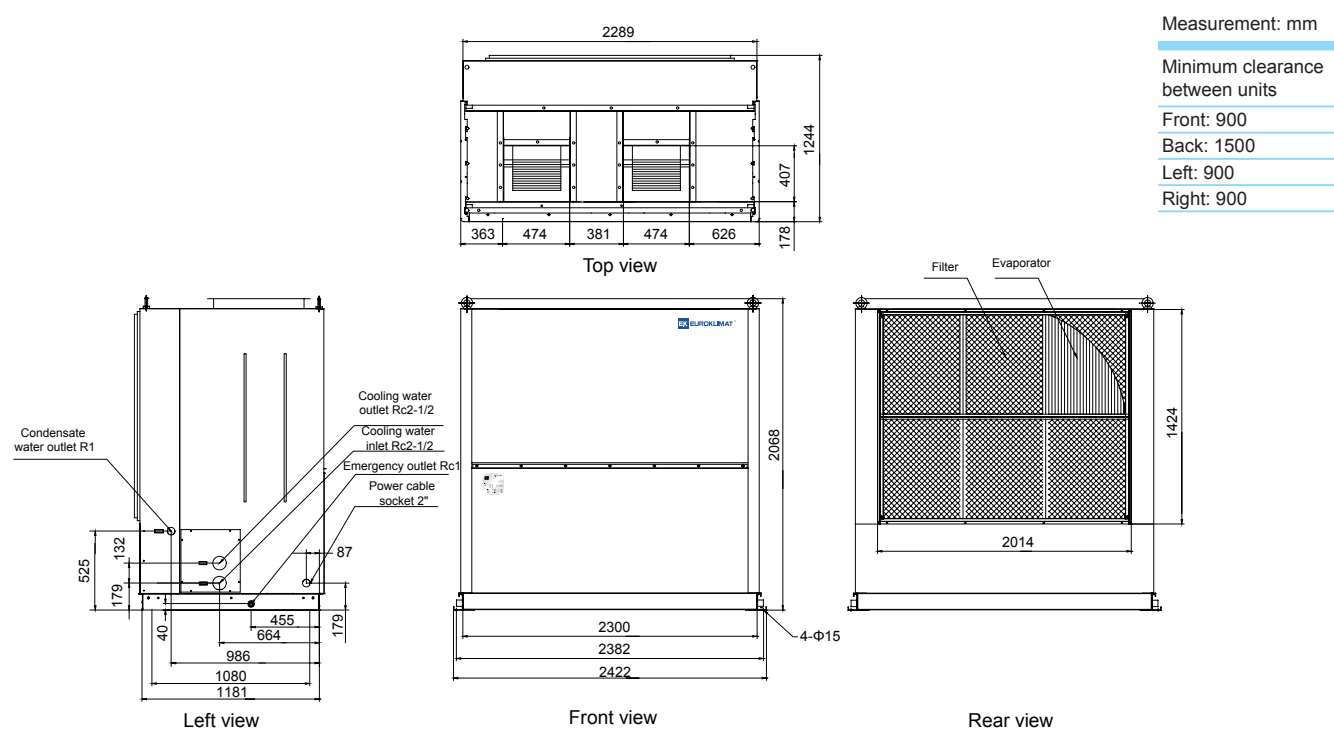
Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

**Model: EKWP135B/EKWP145B (hub tube series)**



Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

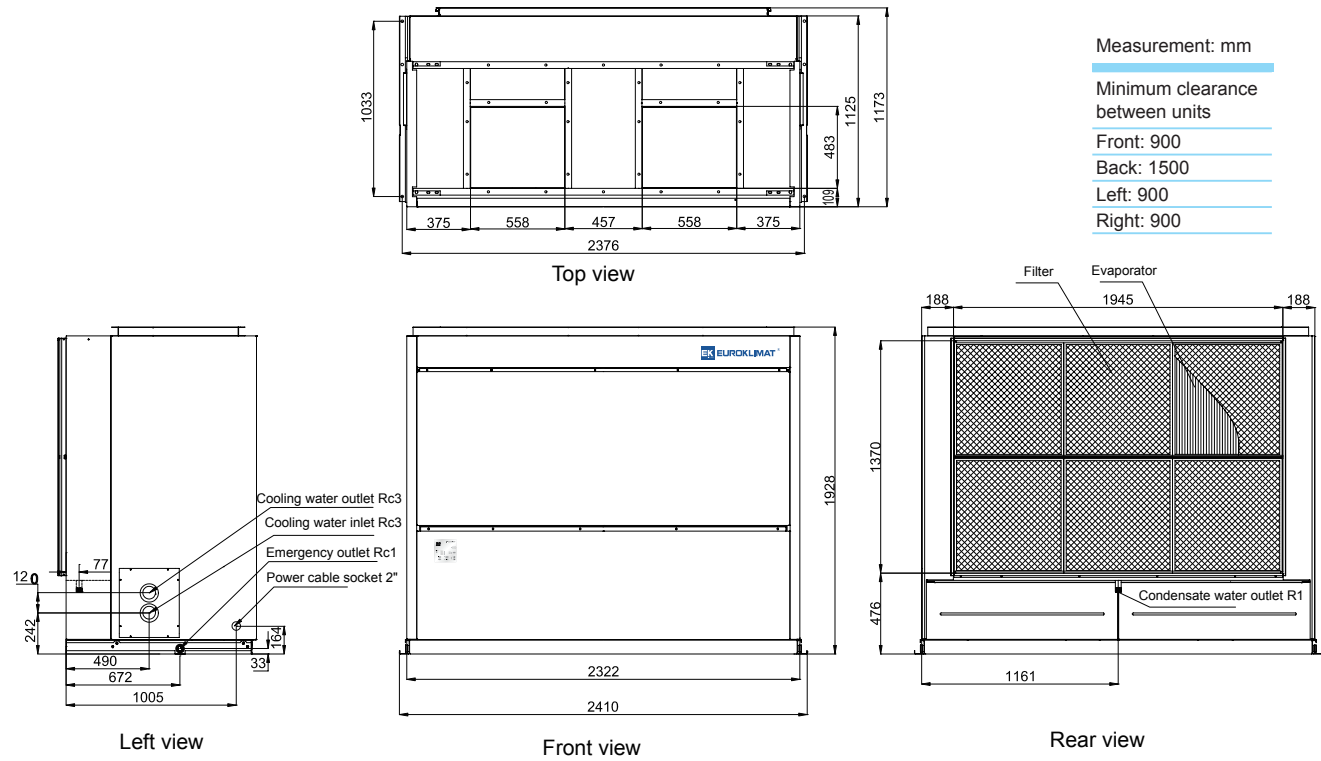
**Model: EKWP155B (sleeve tube series)**



Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

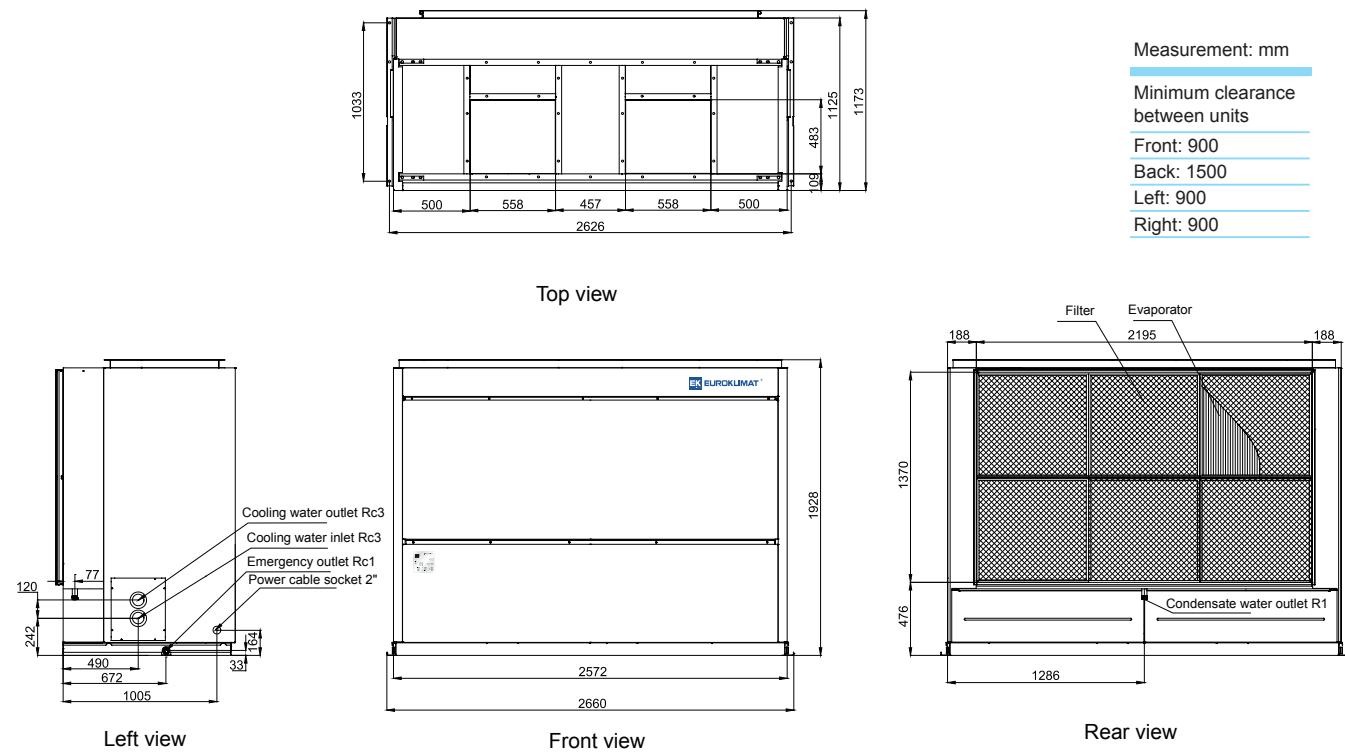


**Model: EKWP165B (hub tube series)**



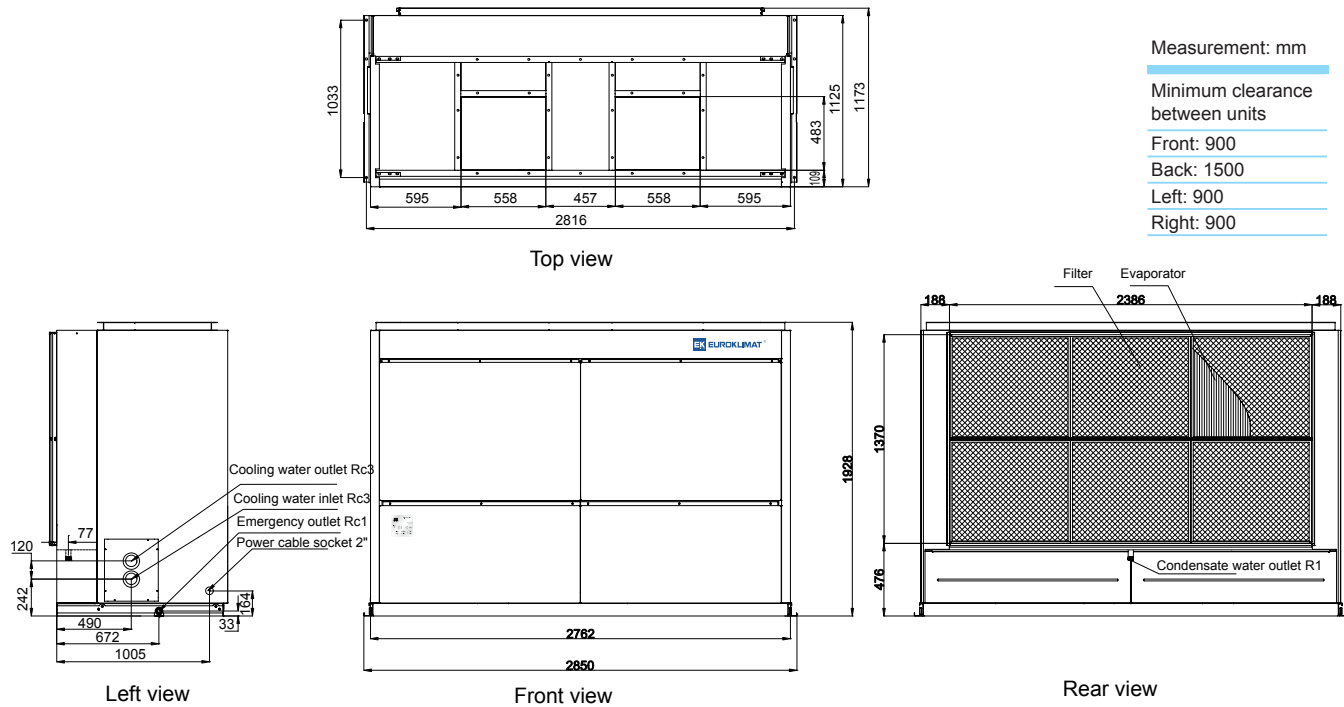
Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

**Model: EKWP185B (hub tube series)**



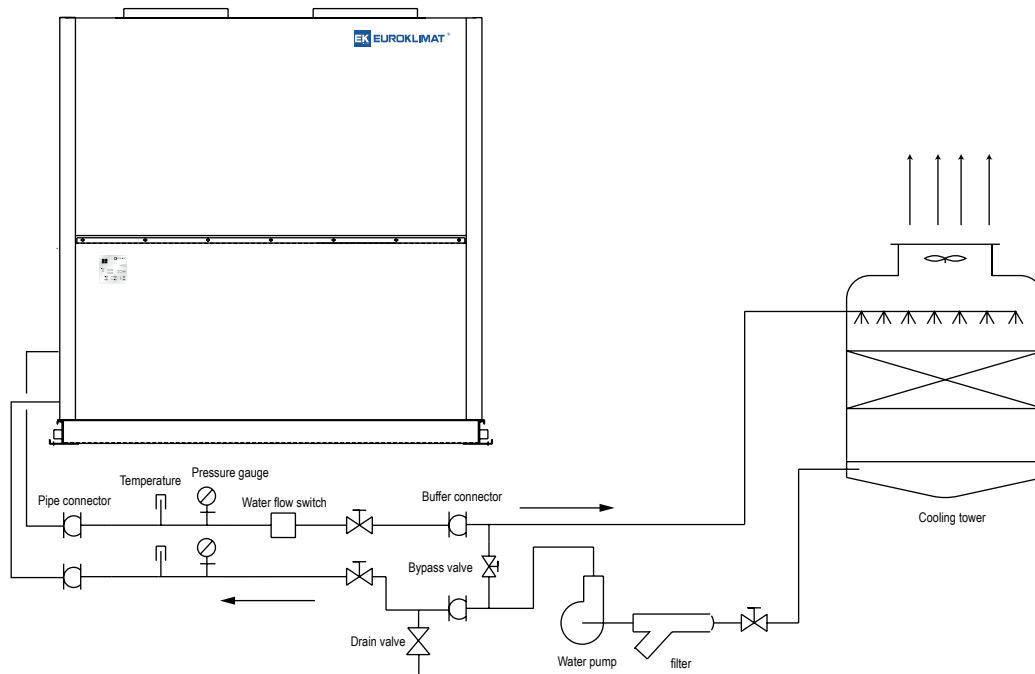
Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

## Model: EKWP205B (hub tube series)



Note: Units with electrical heaters have the same exterior with cooling only units of the same model.

## Unit Installation Illustration



## Requirements on Installation Place

- Not to be installed in outdoor open-air environment
- Not to be installed in damp, corrosive environment or environment with explosive gas
- Must be installed on a level concrete base
- Enough space should be reserved for water discharge, ventilation and maintenance. Please refer to the Dimension Illustration for minimum installation distance.
- During installation, a rubber cushion should be placed between the concrete base and the unit to dampen vibration and noise.
- No direct contact between unit/connecting pipe and wall/mounting ceiling.
- You can install the unit in a place that is insensitive to noise, such as stairways, elevator rooms, rest rooms, etc. A better way is to isolate the unit and the room to be conditioned using partition walls with closed windows and doors. You can install sound mufflers inside the air duct if necessary.

## Air Duct Connection

### Air Supply

For all standard EKWP units, the air outlet has a bell-mouthed connector to facilitate connection with the air supply duct. Air outlet duct with the same diameter as the air outlet is recommended. The length of this section should be at least 3 times the diameter of the impeller before the duct can be connected to a bent pipe or another connector. For detailed information, please refer to AMCA standard 210 "Fan and System".

### Return air

EKWP units feature free return air. The equipment room is the return air plenum. If return air is to be supplied using a duct, the return air connecting flange must be modified and a flexible connector must be used.

### Heat Isolation

The air duct should be coated with a heat insulation layer which is covered by a vapor barrier to isolate external moisture.

## Connecting Water Pipes

- All pipelining must comply with local laws and regulations. Bends and vertical spans should be avoided whenever possible.
- To maintain a constant condensing pressure and temperature, a 3-way water flow modulation valve can be used to modulate the inlet water for the condenser. This valve must be set to ensure that inlet water temperature is above 16°C for the condenser.
- To prevent water temperature from dropping too low, a thermostatic switch (recommended setting is 27°C) can be used to control the startup/shutdown of the cooling tower fan. This makes sure that water temperature is more close to normal.
- The condensed water pipe is connected to the drain coil of the evaporator (a drainpipe is attached to the bottom of the unit for emergency discharge only).
- To prevent external air from entering the evaporator and to facilitate discharge of condensed water, a small bypass section (water trap) can be installed at any part of the drainpipe. The water trap must be 51mm below the drainpipe.
- The drainpipe must stick out of the wall to make sure that water does not trickle along the wall.
- The drainpipe should be coated with a heat insulation layer to prevent dripping of condensed water.

## Minimum Length of Straight Pipe

Model	Impeller diameter $\Phi$ (mm)	Minimum Length of Straight Pipe (mm)
EKWP35B	300	900
EKWP55/75/80/85/100B	380	1140
EKWP110/125/135/145/155B	380	1140
EKWP70/165/185/205B	460	1380

Note:

1. Models with a static pressure box must not be connected to an air supply duct; otherwise the unit might be damaged due to insufficient air flow.
2. Units with electrical heaters have the same exterior with cooling only units of the same model.



2011 Fuyao Glass Co., Ltd



2011 Guangzhou Zhujiang Plaza



2011 Quanzhou Haitian Textile Co., Ltd.



2011 Xi'an Railway Signal Co., Ltd.



2009 Fujian Nanping Nanfu Battery Co., Ltd.



2012 Hitachi Home Appliance (Wuhu) Co., Ltd.



2011 Foxconn



2010 Pepsico  
Guangzhou Coke



2012 Fuzhou  
Coca Cola



2011 Qipai Seven



2011 San Hua  
Holding Group



2011 Martin Emprex Textiles Co., Ltd.



2011 Tuanyi Furniture Mall



2011 SUSINO Umbrella Co., Ltd.

#### EK Iran's Distributor

##### Tahviah Sam Industrial Group

Add: Tahviah Sam Bldg., NO.26, East 14th St., Beyhaghi Blv., Arjantin Sq., Tehran, Iran

Tel: +9821 88526010

Fax: +9821 88526034

Email: [info@tahviesam.ir](mailto:info@tahviesam.ir)

#### EK China

##### Guangdong EuroKlimat Air-Conditioning & Refrigeration Co.,Ltd.

Add: EuroKlimat Industrial Park, Huangjiang Dongguan Guangdong China 523766

Tel: +86 769 8366 0888

Fax: +86 769 8362 2528

#### EK Italy

Add: Euroklimat S.p.A. via Liguria, 8 - 127010 Siziano (PV)

Tel: (39).0382610282

Fax: (39).0382617782



[www.euroklimat.com](http://www.euroklimat.com)

#### EKWP1208-Catalog-BB

- ◆ Illustrations in this document may be different from real products. Please check real products while making a purchase.
- ◆ Product specifications, features, performance parameters, structures and exteriors are subject to change without further notice. Please refer to the nameplate of the product for detailed information.
- ◆ Data in this document has been carefully checked and reviewed. EUROKLIMAT cannot be held responsible for any consequence arising from print errors and omissions.