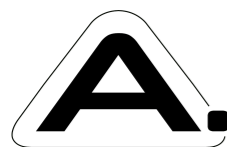




ALTITUDE
REFRIGERATION SOLUTIONS

VERTICAL AIR CONDITIONER(WATER COOLED)



ALTITUDE
REFRIGERATION SOLUTIONS

T: 1800 953 260

W: www.altituderefrigeration.com.au

Postal Address:

PO Box 384, Kellyville, NSW, 2155, Sydney, Australia

PO Box 678, Oxenford, QLD, 4210, Gold Coast, Australia

CONTENT

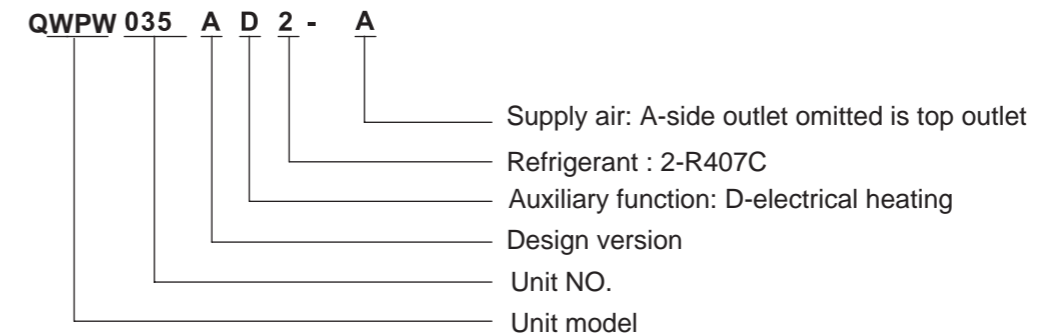
Production overview	02
Model Description	02
Product Features	02
Technological Parameters	04
Top Air Outlet Unit Size	05
Top Air Outlet Unit Size	06
Side Air Outlet Unit Size	07
Unit Installation Space	08
Unit Transport and Lifting	09
Unit Installation	09
Electrical Parameters	11

1 PRODUCT OVERVIEW

Combing with the advanced technology, we developed the vertical air conditioner(water cooled)QWPW series. It has high energy efficiency ratio, and easy to install and maintain. It is widely used in supermarket, office, school, hotel, bank, post office and other industrial.

2 MODEL SPECIFICATION

INDOOR MACHINE



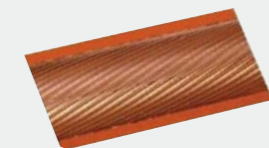
3 PRODUCT FEATURES

The evaporator adopts the high purity seamless inner spiral copper tube and aluminum flake spoiler, after the mechanical expansion, they could combine closely. After the hydrophilic treatment, the aluminum sheet could decrease the condensate film thickness ,reduce the water film barrier, and improve the coil's heat transfer efficiency.

Water cooled condenser use shell and tube type heat exchanger, compact structure, small pressure drop and high heat transfer coefficient(the units under QWPW070 use double-pipe heat exchanger). The tube heat exchanger and double-pipe heat exchanger can't be blocked easily, easy to be washed, it keeps a high heat transfer coefficient for a long time.



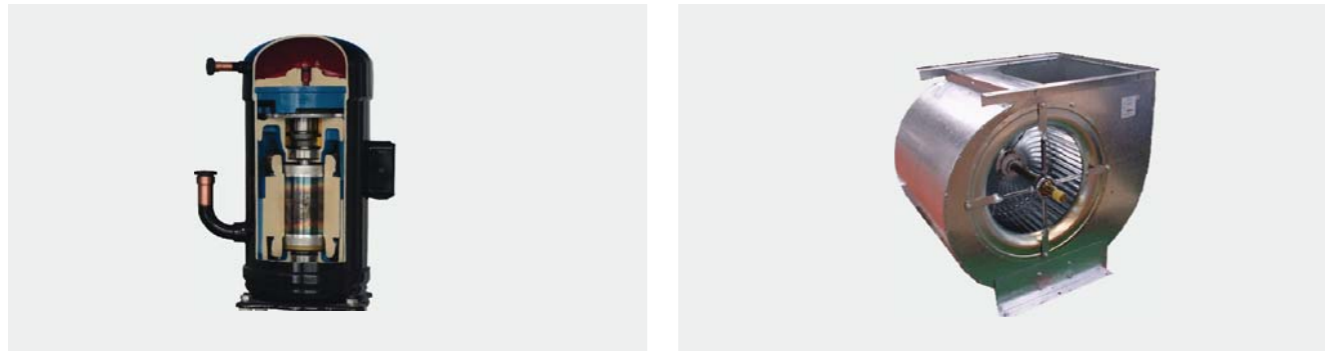
Hydrophilic corrugated double bridge heat transfer



High efficiency internal thread heat exchange tube

3 PRODUCT FEATURES

Compare with the traditional piston compressor, the fully enclosed scroll compressor has stable and reliable performance, lower noise and high energy efficiency ratio. The front curve type multi wing centrifugal double suction impeller has passed the dynamic balance test, can run for a long time without noise and shake, and insure the air supply effect. The unit above the 10HP adopts the double fan to reduce the noise of fan.



The body framework and cover plate use the principle of panel installation, adopt the high-quality steel with electrostatic phosphating spray, they are so firm and beautiful, harmonized with indoor environment. The sound-isolated socks are pasted inside of the cover.

The refrigeration parts adopt the automatic control component of refrigerant system, the control is accurate and the quality is steady.

The nylon filter net is adopted. It is easy to install, dismantle and wash it.

Advanced microcomputer control:

- Easy to operate
- Three working operating: cooling/heating/supply air(heating is electrical heating)
- Energy saving
- Temperature setting range:18°C~30°C
- Time on/off: time range 0~15 hours
- Automatic fault detection and alarm
- Frequent start and stop protection function for compressor.
- The compressor has the auto balance function
- Centrifugal & Remote control(optional)



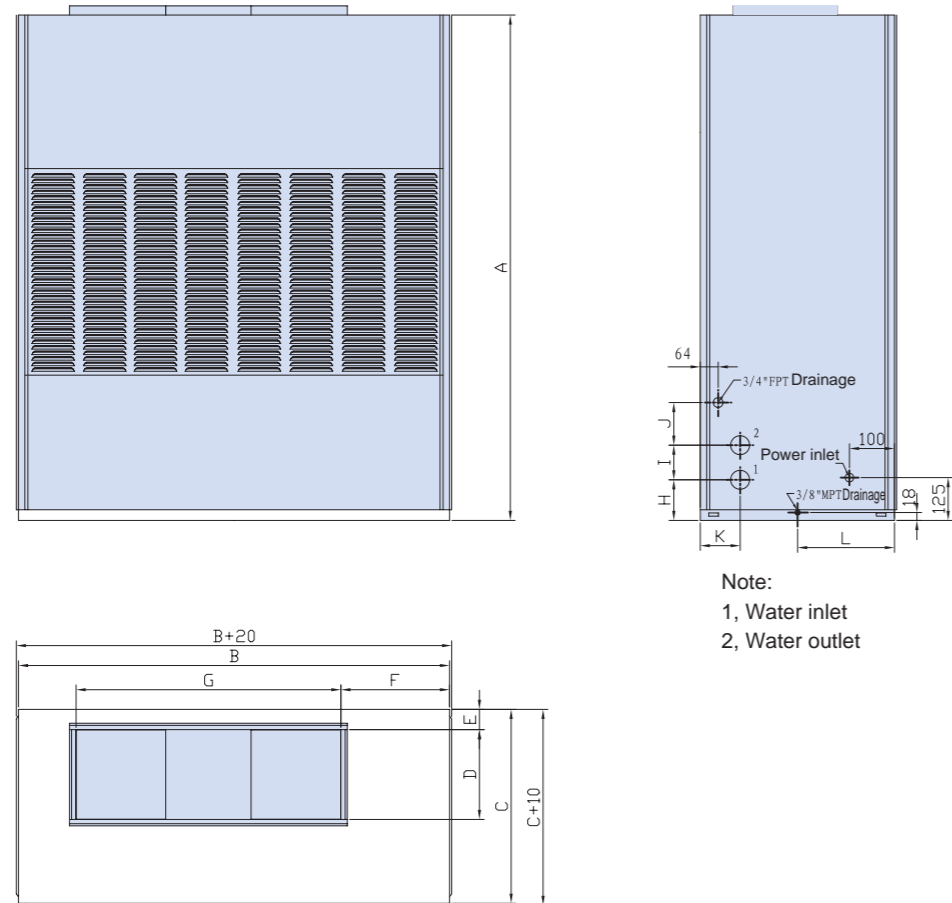
4 TECHNICAL PARAMETERS

PARAMETERS		MODE QEPW	030AD2	035AD2	055AD2	070AD2	085AD2	100AD2	125AD2	135AD2	160BD2	205AD2	
Unit features	Cooling	kW	24.5	31	50	63	78	92	113	123	150	190	
	Electrical heating Optional	kW	9	12	20	27	35	40	50	50	58	60	
	Air flow	m³/h	4100	5500	8600	12000	15000	18000	21000	23000	27000	32000	
	ESP	Pa	80 (0)	80 (0)	100 (0)	100 (0)	100	200	200	200	300	350	
	Noise	dB(A)	58 (56)	60 (59)	63 (62)	66 (65)	69	71	72	73	74	76	
	Power	380V/3N~/50Hz											
Power input	kW	6.4(6.2)	8.0(7.65)	12.5(11.6)	16.7(15.8)	21.1	24.5	30.4	33.6	40.5	51.5		
Refrigerant	Type	R407C											
	Throttle	Capillary											
	Charge	kg	1.5*2	1.9*2	1.9*3	4*2	4.5*2	4*3	4.1*3	4*4	4.1*4	4.1*5	
Cooling system	Compressor	Type	Hermetical scroll compressor										
	Compressor	Qty	2	2	3	2	2	3	3	4	4	5	
	Evaporator	Type	Copper tube and aluminum fins										
	Condenser	Type	Coaxial tube					Shell and tube type heat exchanger					
		Water flow	m³/h	5.2	6.5	10.6	13.3	16.7	19.6	24.1	26.1	31.6	40.6
Resistance		kPa	25	27	34	36	40	42	45	47	49	50	
Water pipe (Rc)		1-1/2	1-1/2	2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	2-1/2	3		
Supply system	Fan	Type	Centrifugal fan										
		Drive	Belt drive										
		Motor	kW	0.75(0.55)	1.1(0.75)	1.5(1.1)	3.0(2.2)	4	5.5	7.5	7.5	7.5	15
	Filter	Type	Nylon filter										
Size		mm	610*655	610*655	915*805	915*805	600*700	600*600	600*676	600*754	600*754	550*754	
Qty			2	2	2	2	4	6	6	6	6	8	
Controller	Microcomputer control												
Electrical heater	kW	9	12	20	27	35	40	50	50	58	60		
Size	Length	mm	1480	1480	1780	1780	1780	2050	2050	2050	2590	2770	
	Width	mm	550	550	800	800	1200	1200	1200	1200	1200	1200	
	Height	mm	1900(2040)	1900(2040)	2100(2400)	2100(2400)	1670	1920	1920	1920	1920	1920	
Weight	Kg	300	340	690	750	950	1500	1550	1600	1800	1900		

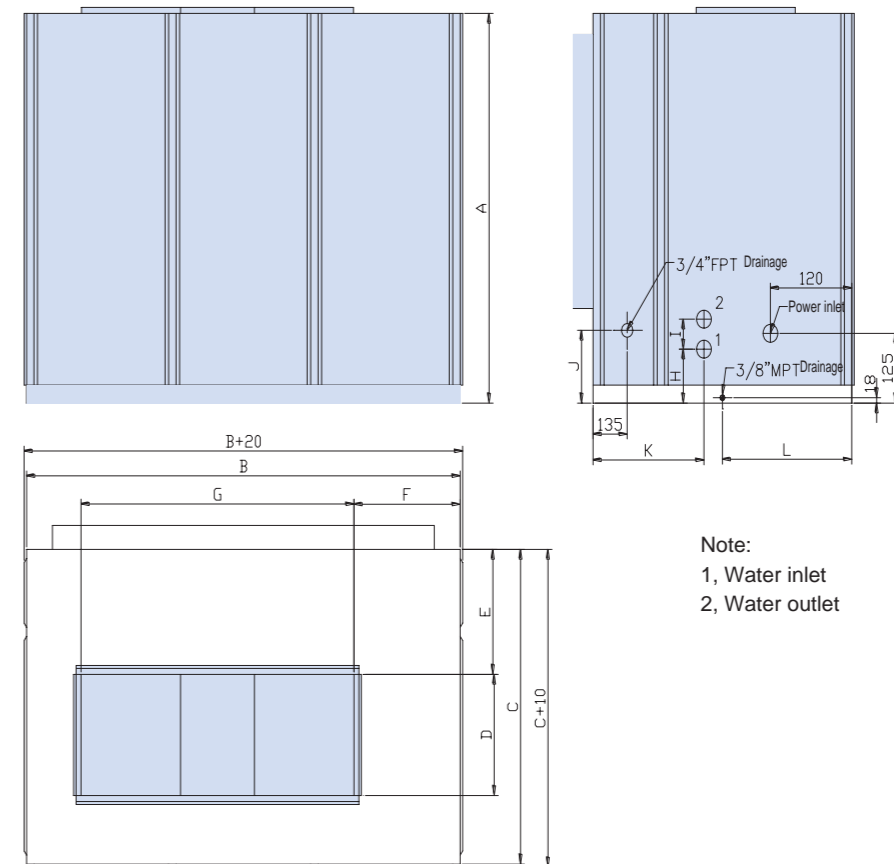
Note:

- 1, All the data is tested based on GB/T17758-2010;
- 2, Cooling capacity doesn't consider the fan and motor loss;
- 3, The standard setting is top air outlet without electrical heater, electrical heater and side air outlet is optional;
- 4, Data in brackets suitable for direct blow type
- 5, All the above is for your reference, for the details please contact with us.
- 6, The total power input doesn't include water pump and cooling tower.

5 TOP AIR OUTLET OUTLINE DIMENSION



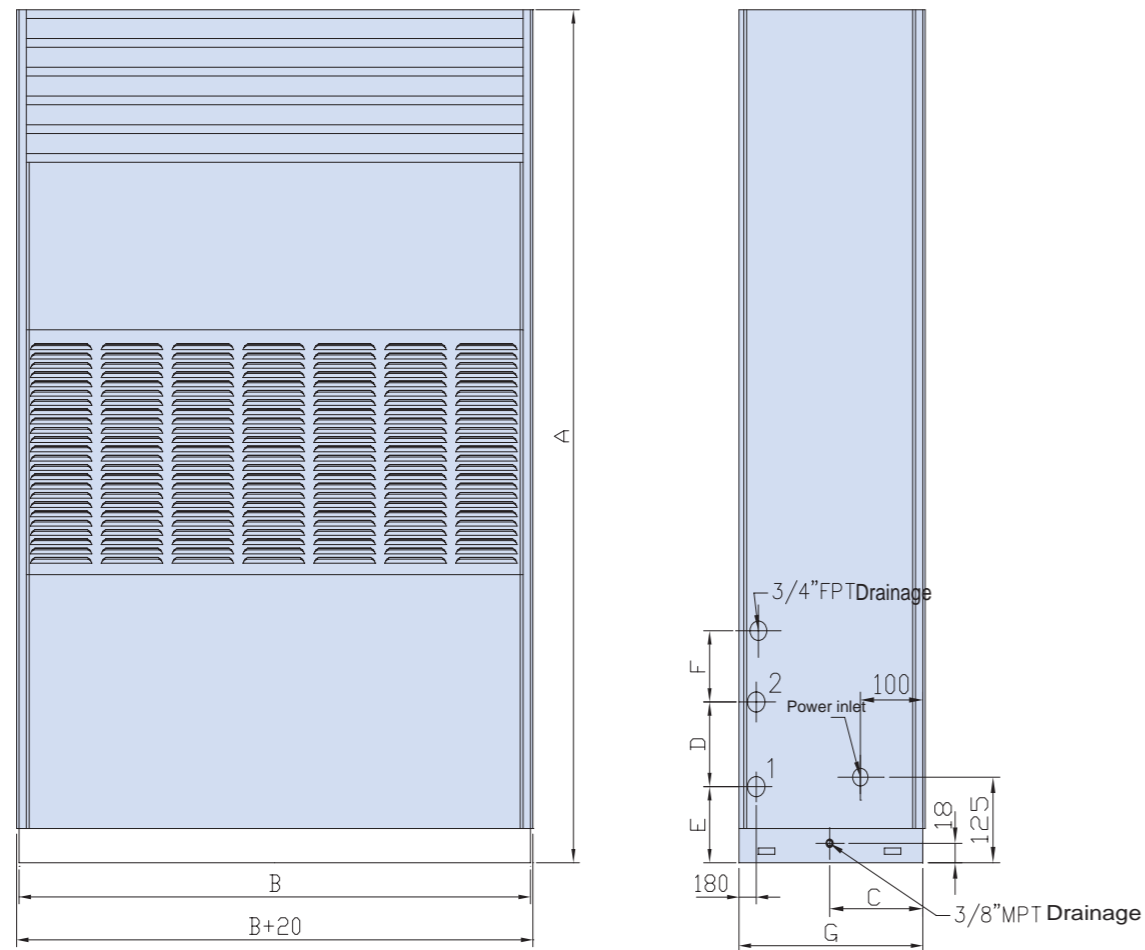
6 TOP AIR OUTLET OUTLINE DIMENSION



MODEL QWPW	A	B	C	D	E	F	G	H	I	J	K	L	1	2
030A(D)-BAB	1900	1480	550	266	40	350	844	180	110	168	180	275	Rc1-1/2	Rc1-1/2
035A(D)-BAB	1900	1480	550	266	40	390	844	180	110	168	180	275	Rc1-1/2	Rc1-1/2
055A(D)-BAB	2100	1760	800	345	229	470	1118	180	124	240	200	400	Rc2	Rc2
070A(D)-BAB	2100	1760	800	345	184	438	1118	180	124	240	200	400	Rc2-1/2	Rc2-1/2

MODEL QWPW	A	B	C	D	E	F	G	H	I	J	K	L	1	2
085A(D)-BAB	1670	1760	1200	345	584	459	1118	180	124	240	550	600	Rc2-1/2	Rc2-1/2
100A(D)-BAB	1920	2030	1200	408	495	557	1330	180	124	250	490	600	Rc2-1/2	Rc2-1/2
125A(D)-BAB	1920	2030	1200	408	495	557	1330	180	124	250	490	600	Rc2-1/2	Rc2-1/2
135A(D)-BAB	1920	2030	1200	408	495	557	1330	180	124	250	490	600	Rc2-1/2	Rc2-1/2
160A(D)-BAB	1920	2570	1200	482	495	557	1576	180	124	250	490	650	Rc2-1/2	Rc2-1/2
205A(D)-BAB	1920	2750	1200	482	495	557	1576	180	124	250	490	650	Rc3	Rc3

7 SIDE AIR OUTLET UNIT DIMENSIONS

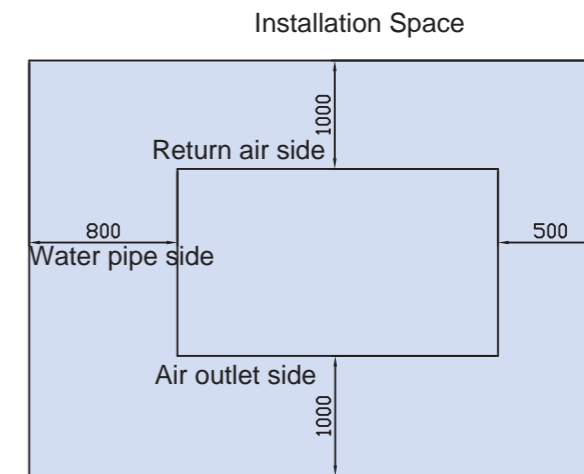


Note:
1, Water inlet
2, Water outlet

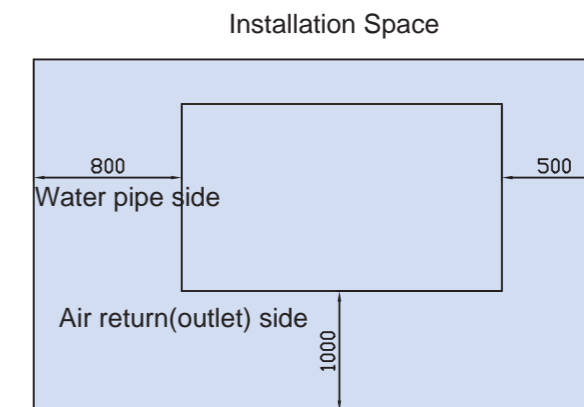
MODEL QWPW	A	B	C	D	E	F	G	1	2
030A(D)-BAB	2160	1460	275	110	180	168	550	Rc1-1/2	Rc1-1/2
035A(D)-BAB	2160	1460	275	110	180	168	550	Rc1-1/2	Rc1-1/2
055A(D)-BAB	2400	1760	400	124	200	240	800	Rc2	Rc2
070A(D)-BAB	2400	1760	400	124	200	240	800	Rc2-1/2	Rc2-1/2

8 INSTALLATION SPACE

1 INSTALLATION DIMENSIONS OF REAR RETURN AIR UNIT (UNIT: MM)

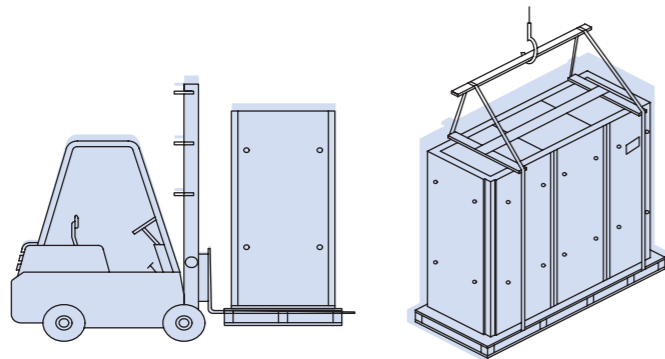


2 INSTALLATION DIMENSIONS OF FRONT RETURN AIR UNITS (UNIT: MM)



9 HANDLING AND LIFTING

- In order to facilitate the transport and hoisting, the wooden pallets are installed at the bottom of the units before they leave the factory.
- Before the unit at site, Do not remove the package to avoid damage.
- Use hand pallet truck or forklift to sling the unit from the bottom.
- Use crane carefully, use the webbing sling or steel rope to bind from the bottom, then sling it. Please use steel section to raise the steel sling above the unit. Otherwise, the steel sling may contact and constrict the unit's surface directly, which could damage it.
- Ensure that the unit is horizontal when you move and sling it, do not put the unit upside down or tipsily.



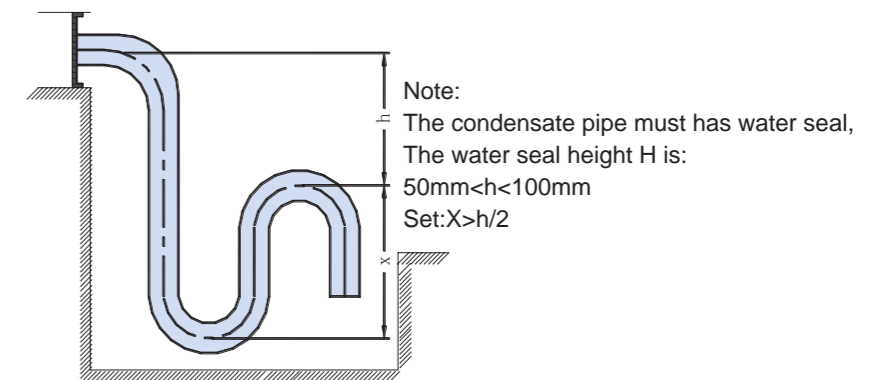
10 UNIT INSTALLATION

1 UNIT INSTALLATION POSITION REQUIREMENTS

- Not installed in the outdoor open-air environment;
- Not installed in the moist environment, or in the environment with corrosive, explosive gases;
- Installed on the horizontal concreted base.
- Before installation, please consider the drainage, ventilation and maintenance space. Please refer to NO.9.
- A shock rubber mat between the base and unit to reduce the shake and noise.
- The unit and tubes should separate from the wall and suspended ceiling.
- The unit should be installed near stairway, elevator room, bathroom or other spaces where some noise is allowed. If erect a partition between the unit and room, the sound insulation will be better, if necessary, install a silencer in the duct.

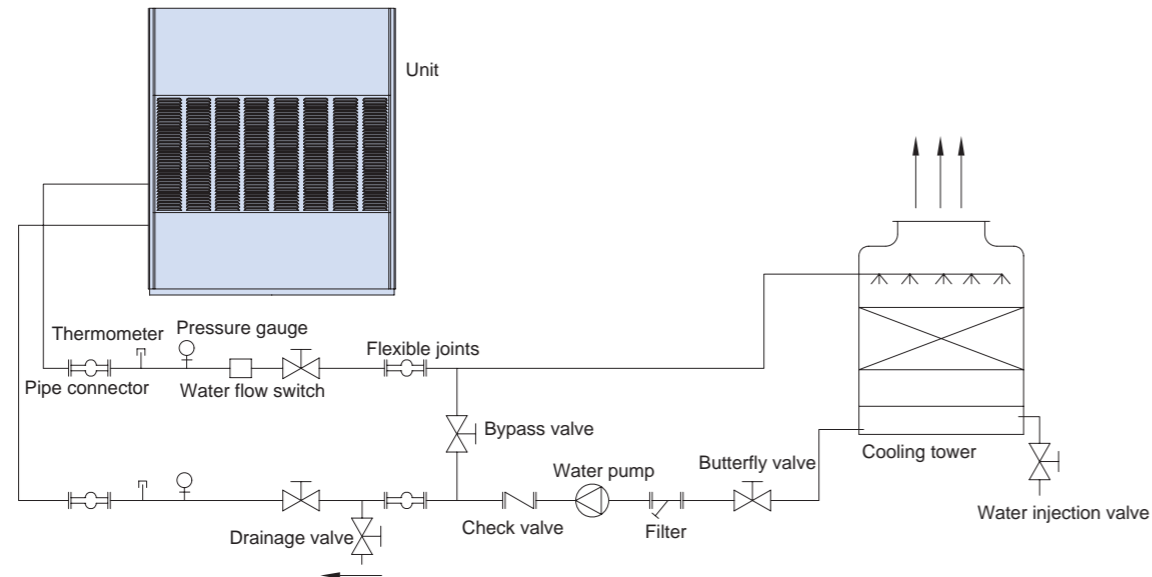
2 PIPE CONNECTION

- Pipes installation must abide the local laws and reduce bending points and up-to-down movements.
- To ensure the constant condensing pressure and temperature, use a three water regulating valve to adjust the water flow, this valve should be set up maintain the lowest water outlet temperature 18°C.
- In order to prevent the water temp. too low, install a temperature switch(suggest set point is around 27°C) to control the cooling tower fan's start and stop, then, it could guarantee the water temperature close to normal.
- The drain should project from the wall to avoid the water flowing to the wall.
- A heat insulating layer is needed for the condensate pipe, otherwise, the condensate may drips.
- A water lock on water discharge pipe can prevent outside air into evaporator and facilitate condensate drainage.
- If the pipe connected direction needs to change, the air return temp. Over heat of each unit needs to reset, ensuring each system have 5-8°C overhear. This need to under the instruction of our people or authorized service people.



10 UNIT INSTALLATION

3 SCHEMATIC DIAGRAM OF SYSTEM INSTALLATION AND CONNECTION



4 DUCT CONNECTION

- Each standard model of the QWPW unit has a flange at the air outlet to connect with the ducts. The air duct should have the same size with the air outlet. The air duct's length should be longer than three times the length of rotor diameter and the minimum length of straight pipe before your connect with the bending pipe or the transition pipe.

MODEL	ROTOR DIAMETER mm	MINIMUM LENGTH OF THE STRAIGHT PIPE mm
QWPW030/035	229	687
QWPW055	305	915
QWPW070/085	305	915
QWPW100/125/135	381	1143
QWPW160	457	1371
QWPW205	457	1371

Note: the plenum box model can't be used to connect to ducts, otherwise, it may cause air shortage. Heat preservation for air duct is necessary, there should be a damp-proof course outside the insulating layer to prevent external water vapor.

11 ELECTRICAL PARAMETERS

- One power connection for the unit is enough, it does not need any other control powers. The unit adopts the 380V/3N/50HZ electric power and the 220V~50Hz control power. The protection measures include compressor, fan motor overload protection, high and low voltage protection of the system, power supply monitoring protection and other protections.

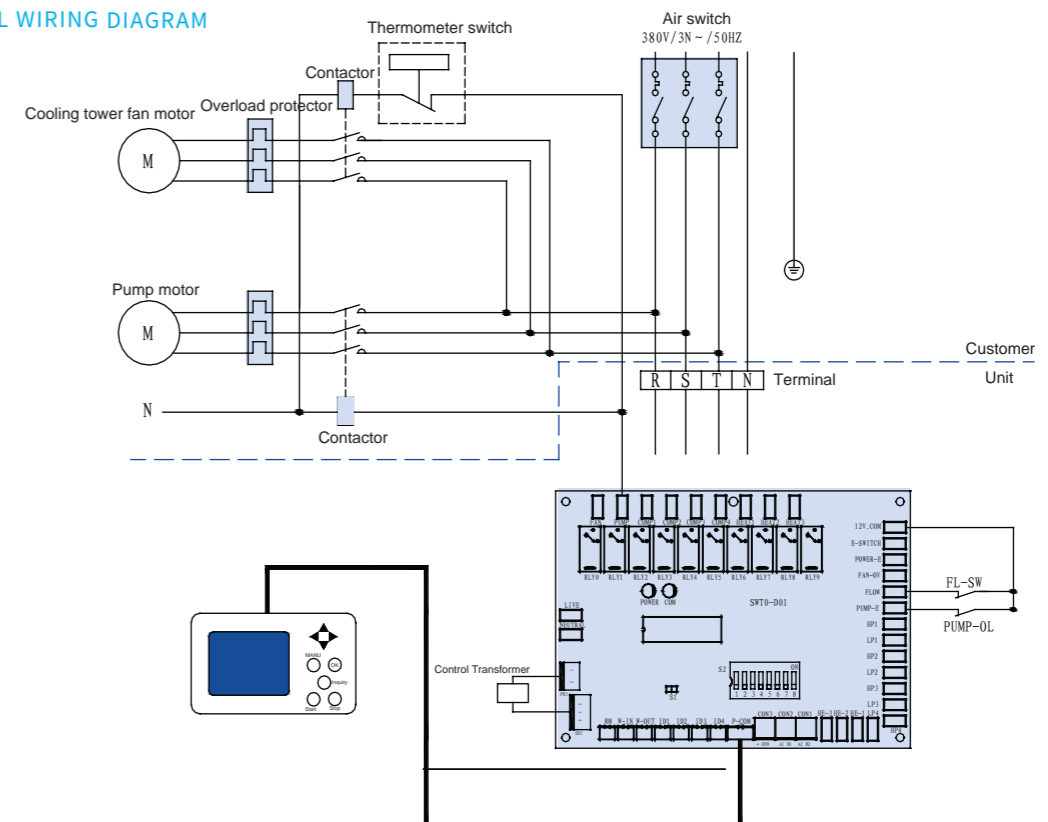
1 OPERATING RANGE

POWER		Voltage Range (V)	Condenser water outlet		Evaporator air inlet	Control pressure	
Compressor	Fan		Temp. range (°C)	Pressure range (MPa)	Temp. range (°C)	LP (MPa)	HP (MPa)
380V/3N~50Hz	380V/3N~50Hz	342~418	18~46	0.14 ~ 1.05	20~30	0.15	2.8

2 POWER WIRE DIAMETER

MODEL QWPW		030	035	055	070	085	100	125	135	160	205
Power supply		380V/3N~50Hz									
Power line	Principle line	Cooling only									
	R/S/T	4	4	10	10	25	25	25	25	35	50
	Cross sectional Area (mm ²)	3									
	Qty	1									
Null line	Cross section	Cooling only									
	Area (mm ²)	1.5	1.5	4	4	10	10	10	10	16	25
	Qty	1									

3 ELECTRICAL WIRING DIAGRAM



- Note: 1, If the unit is cooling in winter, suggest you to add a cold water temperature test switch (the dotted line in the figure), to control the operation of the cooling tower fan.
- 2, The wiring should be connected according to the electrical regulations, and between the electrical accessories terminal and the unit's body, the insulation resistance should be more than 3MΩ, in order to protect the security of the individuals, a good and reliable grounding protection device is needed for the shell of the unit to prevent