

# C.A.G.

COOLING SOLUTIONS



A Division Of CAG Purification Inc.

# SPOT COOLER MANUAL

*10,000 BTU to 60,000 BTU Capacities*



## WELTEM



ISO 9001, ISO 14001

## **1 Preface**

Based on our policy of continuous Research and Development Weltem Co., Ltd is pleased to announce our latest portable air conditioning system I-CEN with an integrated self diagnosis function.

We are confident that the superior design, simple operation and excellent performance of the I-CEN portable air conditioning system will meet the most discerning customer's requirements.

To obtain the most efficient operation of this product please read this operating manual carefully and ensure that it is readily available to all new staff and maintenance crew.

Finally, we welcome all enquiries on the operation of our equipment and would greatly appreciate the opportunity to respond to any further interest in our range of products.

## **2 The features**

- (1) I-CEN is ideally suited to industrial locations where central air conditioning is not feasible and local, focused cooling is required. It is also very useful for external locations.
- (2) The equipment is fitted with casters for ease of motion, and it can be readily adjusted for comfort of use in any location.
- (3) The Control Panel is easy to use and it is equipped with a self diagnosing function which permits the operator to continuously monitor the operating status.
- (4) Warning signals are displayed if abnormalities occur permitting prompt operator intervention.
- (5) The Condensing Unit is integrated into the air conditioner. (internal and external units are in one single unit)
- (6) The Air Duct can be extended for locations where access of the air conditioner is difficult.
- (7) I-CEN can solve of humidity control on occurrence of bacteria about corrosion, rot, condensation and odors.

## **3 Places where I-CEN can be used**

- (1) Factories or work places where complete room cooling is not feasible.
  - ex) Textile mills, Food processing plants, Machine shops, etc.
- (2) Work places where excessive heat is generated.
  - ex) Restaurant kitchens, Cleaning factories, Casting foundries, Plastic injection factories, Boiler rooms, Heat treatment rooms, etc.
- (3) External work places.
  - ex) Auto-repair shops, Shipbuilding and industrial work yards, Golf ranges, Golf courses, etc.
- (4) Place which needs humidity maintain.
  - ex) Computer Rooms, Server Rooms, Underground Spaces, Warehouse, Buildings with high humidity, etc.

## 4 Safety cautions

These are important for the user's safety and prevention of property damage and/or loss. Please read carefully to ensure the safe and efficient operation of this product.



- The Power supply voltage should be in accordance with the specification shown on the air conditioner.
- When using an extension cable, please ensure that the amperage of the cable is adequate. Only use one extension cable for each I-CEN to avoid any risk of fire.



To reduce the risk of electric shocks

- The I-CEN should always be earthed.
- Damaged power supply cords, loose wall sockets etc. should not be used.
- Do not unplug the power supply whilst the I-CEN is in operation.
- Do not operate with wet hands whilst the I-CEN is in operation.
- Do not touch the power supply cable or power supply plug with wet hands.



Other recommended precautions

- Do not move the I-CEN whilst in operation. There may be a risk of accident or damage.
- Ensure the I-CEN is always horizontal when in operation. It should not be used on inclined sites.
- Ensure there is a gap of least 60cm between the Condenser of I-CEN and the wall.
- Do not use I-CEN where there is direct sunlight or another heat source. To avoid any risk of overheating.
- Do not place your hand or impede the air inlet or outlet of I-CEN.
- Do not step on or put anything on the I-CEN. High risk of accident or damage.
- Do not try to disassemble, repair or modify the I-CEN. An indiscrete change. could create a very high risk of accident, fire or electric shock.



- Stop operation immediately if an abnormal noise or smell is noticed, and contact The Service Center.



Cleaning

- Clean the product once a week.
- Do not spray water directly on the enclosure of the I-CEN. There may be risk of electric shock, fire and damage.
- Clean the I-CEN after stopping operation. Unplug the power connection and wait for the fan to stop.



- If the I-CEN is not cleaned regularly its performance may be degraded and breakdowns may occur.

## 5 Environmental condition for using I-CEN

Operating the I-CEN outside of the following environmental limits may cause malfunctioning or breakdown of the product.

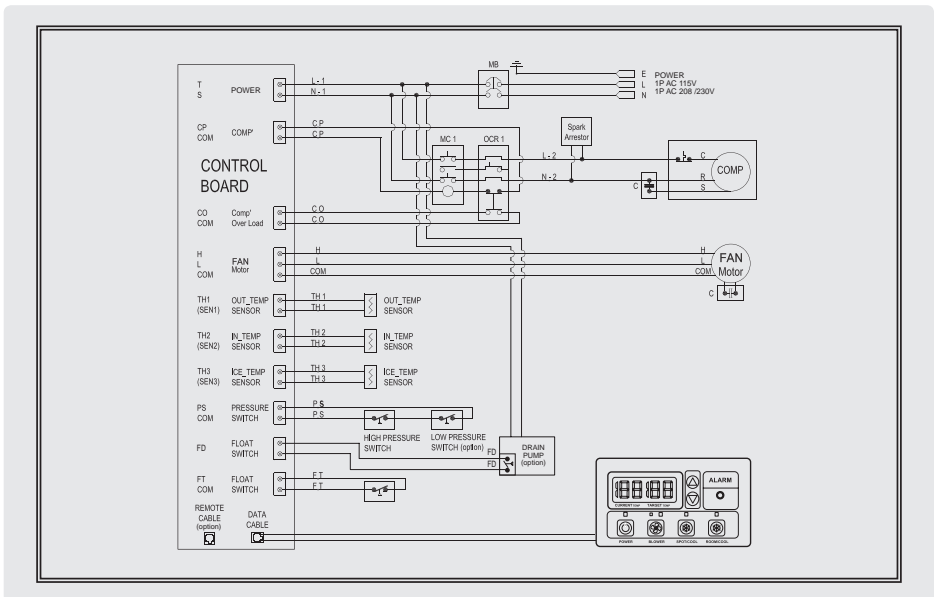
Temperature Between 18°C~45°C

## 6 Cleaning of Filter

- (1) Take out the filter.
- (2) Remove all dust from the filter using a vacuum cleaner or brush.
- (3) Wash with lukewarm water using a neutral detergent when heavily contaminated with dust or oil.
- (4) Reuse the filter when completely dry.
- (5) Wash more frequently when the I-CEN I used in dusty locations. Dusty may casused the unit failure.

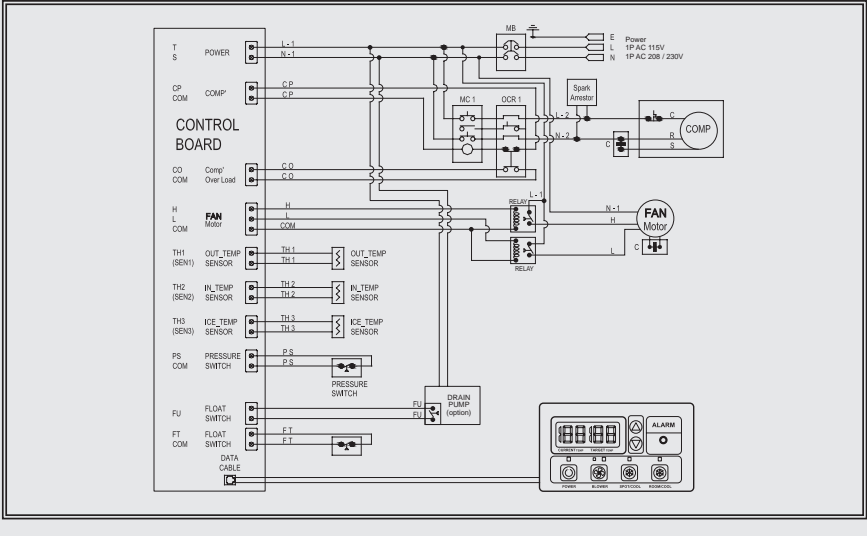
## 7 Wiring diagram for I-CEN I

Portable air comnditioner WPC-3000,5000

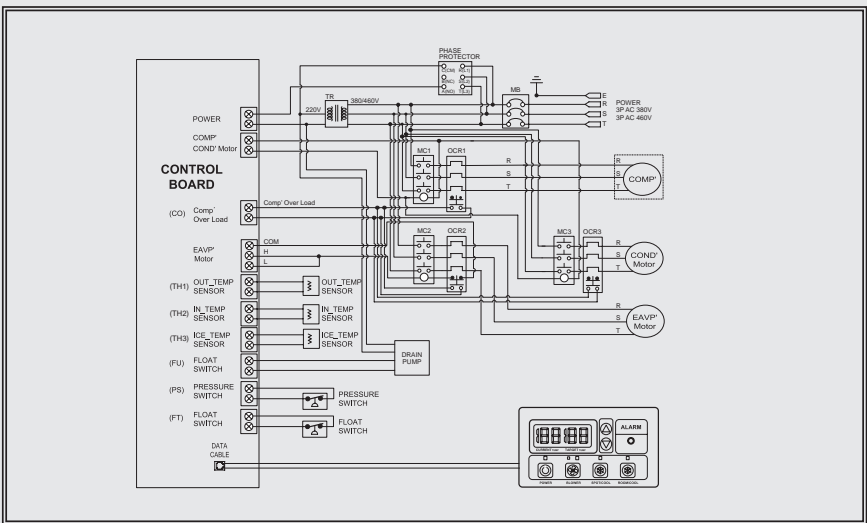


## 7 Wiring diagram for I-CEN

Portable air conditioner WPC-4000,6000,7000,9000

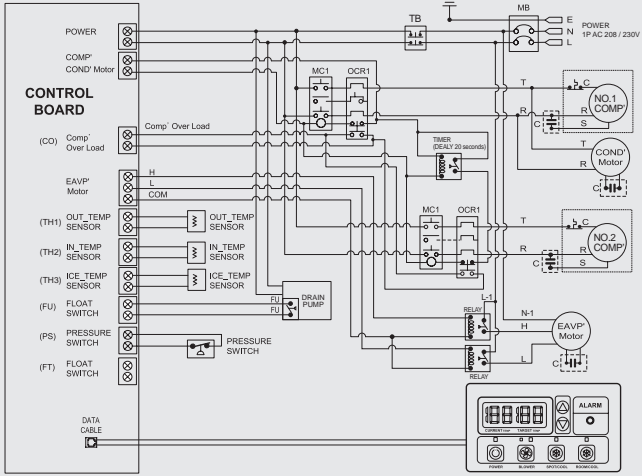


Portable air conditioner 3P WPC-15003 / WPC-23000



# 7 Wiring diagram for I-CEN

Portable air conditioner 1P WPC-15000



### [WARNING REGARDING PROPER LOCATION FOR INSTALLATION]

**▲ WARNING** *DO NOT use the unit in explosive environments or in areas where flammable gas leakage may occur.*

**▲ WARNING** *DO NOT use the unit in areas where it will be exposed to rain or water.*

**▲ WARNING** *DO NOT use the unit in a corrosive atmosphere.*

**▲ WARNING** *DO NOT use the unit above 18°C~45°C*

**▲ WARNING** *DO NOT install the unit on uneven or sloping surface. The unit may roll or topple over even if the casters are set to locked position.*

### MOVING THE UNIT

Unlock the casters and push the unit to flat, level surface and set the caster brakes to the locked position.

### PLUGGING IN THE UNIT

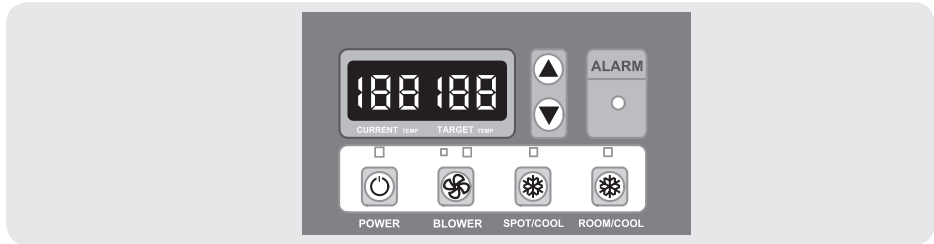
- Check the prong and surface of power cord plug for dust/dirt. If dust and/or dirt are present, wipe off with a clean, dry cloth.
- Check the power cord, plug and prongs for damage or excess play.
- If any damage or excess play is found, contact a qualified repair technician or qualified electrician to perform replacement or repair of the power cord, plug or prongs.

**▲ WARNING** *If the power cord or plug is damaged, repair should only be performed by qualified electrical personnel.*






**▲ WARNING** *DO NOT connect / disconnect the power cord or attempt to operate buttons with wet hands. This could result in electrical shock.*

## 9 Environmental conditions for using I-CEN

### (1) Display panel for I-CEN (All models)



### (2) Description of the display panel for I-CEN (All models)








	<b>POWER Button</b>	There is a beeping sound When the Power Button is pressed for 1 seconds and the fan starts to move.
	<b>BLOWER Button</b>	Adjusts the Fan speed Low or High.
	<b>SPOTCOOL Button</b>	Starts the compressor and cold air will be emitted within 2minutes of SPOT COOL Button being pushed (*TH1)
	<b>ROOM COOL Button</b>	Starts the compressor and cold air will be emitted within 2minutes of the ROOM COOL Button being pushed (*TH2)
	<b>UP/DOWN Button</b>	Incrementally changes the target temperature / data value by $\pm 1$ . If continually depressed the temperature data /value changes by $\pm 10$ i
	<b>CURRENT TEMP</b>	Shows the outlet temperature when I-CEN is operating normally. Letters corresponding to the abnormality blink when abnormalities occur.
	<b>TARGET TEMP</b>	This is the temperature set from the unit Controller in Room cooling mode.
	<b>ALARM Lamp</b>	The lamp flashes when abnormalities occur. The System will stop if the lamp flashes for longer than 3minutes. If cancelled within 3 minutes, the system will return to normal.
	<b>TIMER</b>	Press the SPOT/COOL Button and ROOM/COOL Button simultaneously and hold for more than 1 second to enter the Timer mode., then adjust the UP/ DOWN Timer Button to set the time to 0,15,30,60 or 90 minutes. After 5 seconds, the set time will be automatically saved and the air conditioner will operate until the set time. The time can also be saved by pressing the SPOT/ COOL Button If you want to cancel the pre-set time, enter the timer mode and set the UP/DOWN BUTTON TO 0 minutes. Or alternatively switch the power off and operate again.
	<b>Fahrenheit / Celsius Change</b>	Press the SPOT/COOL and ROOM/COOL buttons simultaneously for more than 1 second to change the temperature range.



### (3) Alarm codes

The alarm light is activated when abnormal operation occurs, and a code is displayed on the control panel. The compressor and condenser fan motor will stop operating. The evaporator fan continues to run for a further 3minutes. If the fault is rectified within 3minutes, the unit resumes operation.

If the fault persists for more than 3minutes, the evaporator fan also stops. The fault must be rectified before the unit can resume normal operation. (FU alarm is applied when you use the drain pump)

Alarm Display	Problem	Cause	Corrective Action
	Compressor over-loaded	<ul style="list-style-type: none"> <li>• Ambient temperature is too high</li> <li>• Unstable voltage supply</li> <li>• Defective compressor</li> <li>• Over current relay defect or broken connection</li> </ul>	<ul style="list-style-type: none"> <li>• Do not use the air conditioner if ambient temperature is higher than 45°C (113°F)</li> <li>• Contact a qualified service agent</li> <li>• Replace compressor</li> </ul>
	Condensate water level alarm	a. Condensate tank is full	a. Empty the water tank b. After installation of the water tank, press the SPOT/COOL or ROOM/COOL or ROOM/COOL button to resume operation
	Refrigerant high pressure switch	<ul style="list-style-type: none"> <li>• Blocked air filter</li> <li>• Blocked / kinked exhaust duct</li> <li>• Ambient temperature is too high</li> </ul>	<ul style="list-style-type: none"> <li>• Clean air filter</li> <li>• Ensure exhaust duct is not blocked / kinked</li> <li>• Do not use the air conditioner if ambient temperature is higher than 45°C (113°F)</li> </ul>
	Abnormal temperature sensor value	TH1(Outlet) temperature sensor has a loose or broken connection	Contact a qualified service agent
	Abnormal temperature sensor value	TH2(Inlet) temperature sensor has a loose or broken connection	Contact a qualified service agent
	Frost prevention sensor and Abnormal temperature sensor value	<ul style="list-style-type: none"> <li>• Indoor heat exchanger temperature too low</li> <li>• TH3 temperature sensor has a loose or broken connection</li> </ul>	<ul style="list-style-type: none"> <li>• Do not use the air conditioner if ambient temperature is lower than 18°C (64°F)</li> <li>• Contact a qualified service agent</li> </ul>
	Condensate water level alarm	Condensate tank is full	<ul style="list-style-type: none"> <li>• Empty the water tank</li> <li>• After installation of the water tank, press the SPOT/COOL or ROOM/COOL button to resume operation</li> </ul>

## 10 Filter Cleaning

There are 2 filters in the unit. The evaporator filter is located at the front of the unit. The condenser filter is located at the rear of the unit.

1. Open the front grill.
2. Slide filter up and use vacuum cleaner to remove the dust from the filter.
3. If the filter is heavily covered with dust and dirt, warm water and mild soap or neutral detergent may be used to wash the filter. Do not use any other chemicals to clean filter, as they will likely damage the filter.
4. Dry the filter in a shaded area before replacing it. Do not operate the unit without the filter installed and the filter guard in the closed position.
5. Replace the clean filter and close the filter grill.
6. To clean the condenser filter, lift up on the rear filter from the middle bar slightly and then angle the filter outwards from the bottom and remove.
7. Use the same cleaning procedure as above (3~5)
8. To replace the condenser filter, place the top of the filter in the guide and slide the filter up until the bottom of the filter clears the frame. Then push the bottom of filter into the guide and let filter into guide and let filter fall inside the guide.

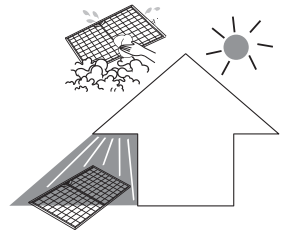
**NOTE :** For effective cooling clean the filter at least every 2 weeks.



**(Removing Filters)**

- Remove dust from the filter using a vacuum cleaner hose attachment.
- If required wash the filter in lukewarm water with a mild detergent. Leave to dry in a shaded area before reinstalling.

- Pull the filter frame forward to remove the front filter.
- Slide filter up and use a vacuum cleaner to remove the dust from the filter.
- Lift up on the rear filter from the middle bar slightly and then angle the filter outwards from the bottom and remove.



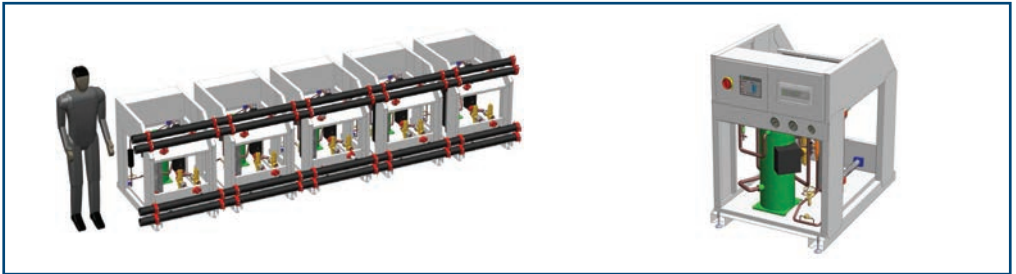
**(Removal of dust)**

# ALSO AVAILABLE FROM STOCK

## Air-Cooled Chillers From 1/2 ton to 40 ton



## Water Cooled Chillers From 5 ton to 10 ton (Modular Design)



### CAG COOLING SOLUTIONS

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