

## CABERO CH AND CH\_E INSTALLATION INSTRUCTIONS

### WARNING

- This CABERO evaporator is shipped with a holding pressure of dry air or nitrogen so care must be taken when releasing this pressure.
- Only suitably qualified and licensed personnel should install this refrigeration equipment.
- This equipment must be wired according to local electrical regulations by suitably qualified and licensed personnel.

### LOCATION GUIDE AND MOUNTING

Model	Min. Clearance mm	
1/30E	500	Sufficient space must be allowed for correct operation and easy maintenance of this CABERO evaporator. Special attention should be taken to ensure adequate space is provided to replace the defrost heaters if fitted. See the diagrams and table of models below.
1/35E	750	
2/30E	1100	
2/35E	1500	
3/35E	2100	
4/35E	2800	
1/50E	1200	
2/50E	2300	
3/50E	3400	

The evaporator must be securely fixed to the ceiling using the flush mount brackets provided.

### REFRIGERATION CONNECTIONS

- Ensure the safe release of holding pressure.
  - HOT surfaces will be present during brazing.
- Fit an externally equalised TX Valve to the distributor and ¼" equaliser line taking care not to direct the gas flame toward the evaporator

during brazing. To avoid possible liquid slugging to the compressor the suction line should lift directly towards the ceiling immediately it leaves the evaporator. Ensure line is cool before securing and insulating the bulb of the TX Valve on the horizontal suction line inside evaporator case upstream of external equaliser tube. A comprehensive leak check must be carried out prior to system evacuation.

### CONDENSATE DRAIN CONNECTIONS

To ensure good drainage minimise the drain length within the refrigerated space, ensure adequate fall and provide a water trap outside the refrigerated space to prevent odours and or air entering via the drain. In refrigerated spaces below 0°C the drain should be insulated and heated.

### ELECTRICAL CONNECTIONS

- All electrical connections must be carried out according to local electrical regulations by suitably qualified and licensed personnel.
  - Ensure the power is disconnected before accessing the connection boxes.
  - Fixings can loosen during transport ensure all connections must be checked for tightness.
- Cables should enter the connection boxes using cable glands. Electrical connections are shown in the wiring diagram located inside the end cover.

All 300 mm and 350 mm fans are 240 Volt Single Phase.

All 500 mm fans are 400 Volt 3 Phase.

All electric defrost heaters are 240 Volt Single Phase only therefore a neutral is required.

### DEFROST CYCLE

CH\_E evaporators are fitted with electric defrost heaters and a heater safety thermostat. The heater safety thermostat must remain in circuit at all times to prevent overheating of the evaporator. A clearly labelled

temperature sensor point is provided for electronic control of defrost functions and is located on a refrigerant return bend. Ensure the sensor is firmly attached to this bend and insulated. Approximate defrost termination temperature at this sensor point is +4 °C to + 6°C.

### COMMISSIONING

Every application is unique therefore correct sizing of the TX Valve and fine tuning of the superheat is required. During stable operation with the refrigerated space at or near design temperature the superheat can be determined by taking the following readings.

- Te = Evaporating temperature correlating to the pressure taken at the Schrader valve using an Actrol Refrigerant Temperature / Pressure Chart.
- Tb = Temperature at TX Valve Bulb.

Superheat = Tb – Te

Superheat should be set between 5 and 7 K for efficient and stable operation. A defrost cycle should be observed to allow fine tuning of the initiation time and the termination temperature or time.

### MAINTENANCE

The drip tray of this CABERO evaporator is powder coated internally for easy cleaning.

- Isolate from power supply before cleaning.

The drip tray is easily removed for cleaning,

- Disconnect the drain
- Remove the drip tray locating screws
- The drip tray will now hinge down and can be removed for cleaning.

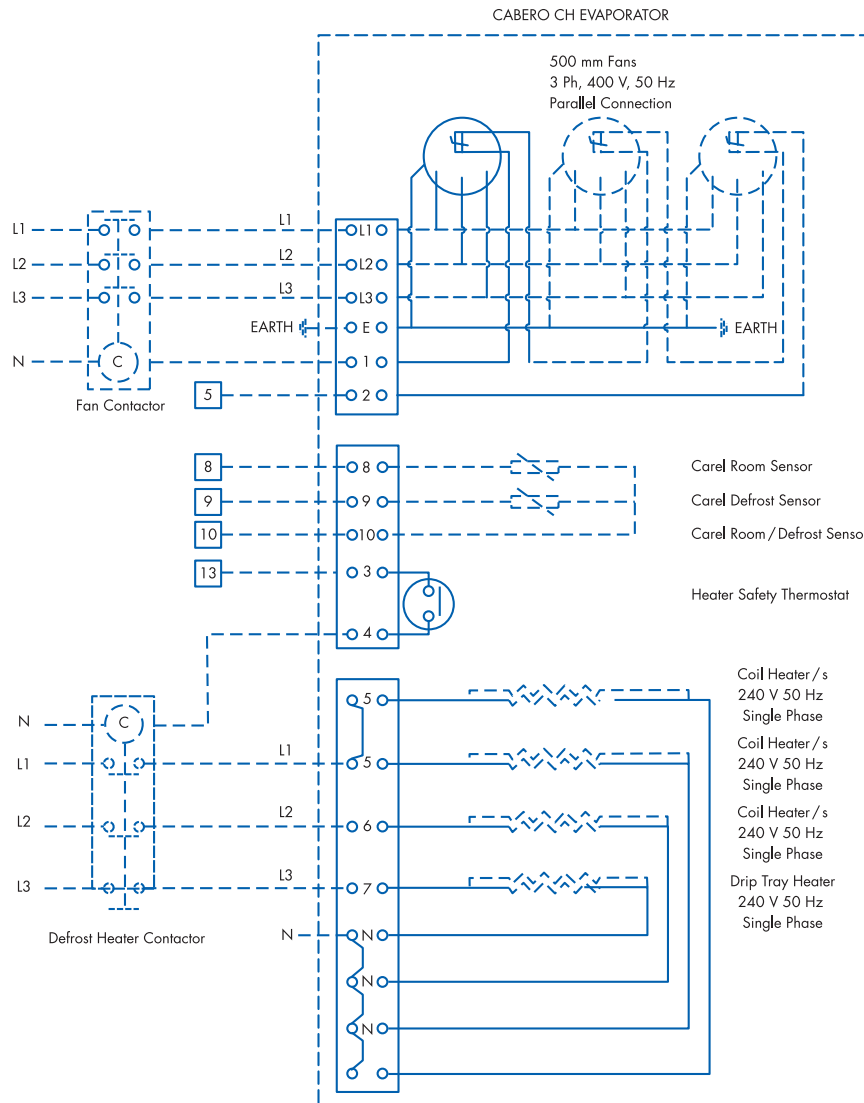
### DECOMMISSIONING

This CABERO evaporator must only be decommissioned by suitably qualified and licensed refrigeration and electrical personnel. All local electrical and controlled substance regulations must be followed.



## WIRING DIAGRAM FOR CAREL IR 33C SERIES CONTROL WITH TEMPERATURE TERMINATION

- 5 CAREL IR 33 TERMINAL
- SUGGESTED FIELD WIRING
- EVAPORATOR WIRING
- EVAPORATOR TERMINAL NUMBER



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