

Cossiga Product Manual - Dimension Series D4



Warning:

All instructions and specifications are intended as a guide only and are subject to change without notice, check the cabinet and any literature supplied with the cabinet for special instructions appropriate to the cabinet before implementing installation and servicing.

Servicing should only be carried out by an approved service agent or a registered Electrician or Refrigeration Engineer.

Full cabinet specifications available at www.cossiga.com

Product Function and Specifications

D4 Product Range

Common Functions and Specifications

Application	
Product Loading	Product loading limited by shelf capacity.
Internal Air Movement	Internal air movement is kept to a minimum to protect product. Air volume may vary depending on product and performance requirements.
Operating Temperature Measurement	All refrigerated and heated cabinets include temperature measurement devices accurate with +/-3 deg C.
Compliance	All units are designed for compliance with national codes of compliance food handling. Standard units are set up for compliance with Food Standards Australia/New Zealand. Standard 3.2.2 Food Safety Practices and General Requirements.
Light Ballasts	AS 3168 & 2643 Tridonic ATCO 230V 50Hz 15-36W
Fans	CE, TUC and CSA approved, impedance protected SUNCON 220-240V 50-60Hz 0.06-0.125A

Electrical	
Testing	All units are tested ex factory and certified for electrical safety.
Connections	All cabinets have external power connection bottom rear right.
Notification	All units have serial number tags with voltage and amperage requirements clearly marked.

Operating Environment	
Temperature and Humidity	All products set up for standard local conditions with a maximum environment of 25 deg C and 60% RH.
Environmental Insulation	All refrigerated cabinets have double glazed doors and sides.
	All units have thermobrake insulation.

Standards Compliance	
Performance	Standards Australia/New Zealand Standard 3.2.2 Food Safety Practices and General Requirements.
Electrical Standards and Testing	AS/NZS 3100:1997 And in accordance with NZECP 3:2000 NZ Electrical Code of Practice for Electrical Safety of fittings and Electrical Appliances.
Stainless Steel	Stainless Steel SS304
Glazing	All exposed glass toughened to AS/NZS 2208:96
Light Ballasts	AS 3168 & 2643 Tridonic ATCO 230V 50Hz 15-36W
Fans	CE, TUC and CSA approved, impedance protected SUNCON 220-240V 50-60Hz 0.06-0.125A

Product Function and Specifications

D4 Product Range

Refrigerated Functions and Specifications (RF Models)

Model	D4RF9	D4RF12	D4RF15
Compressor	Tecumseh CAJ9510Z 1 HP 240V/50Hz	Tecumseh CAJ9510Z 1 HP 240V/50Hz	Tecumseh CAJ9513Z 8/9 HP 240V/50HZ
Refrigerant	R404a - 550g	R404a - 600g	R404a - 650g
Controller	Carel PBO0FOHA10	Carel PBO0FOHA10	Carel PBO0FOHA10
Capillary	ID 1.2mm x 2m	ID 1.2mm x 2m	ID 1.5mm x 1.5m
Evaporating Pressure	2Kgf/cm ²	2Kgf/cm ²	2Kgf/cm ²
Fans	Sheng Kwei, BP1725AP-22-1 34W/240V	Sheng Kwei, BP1725AP-22-1 34W/240V	Sheng Kwei, BP1725AP-22-1 34W/240V

Operational Range	Refrigerated cabinets are designed to provide a controlled temperature in the 2-15°C range.
Temperature Recovery	All cabinets use forced air movement to assist with temperature recovery. Cabinets have front and rear ducting to reduce temperature loss on door opening.
Temperature Distribution	All units designed for no more than 2°C difference between any two points and have forced air movement to ensure temperature distribution.
Temperature Measurement and Control	All units are supplied with a programmable controller with adjustable offset for measurement and control purposes.
Operating Temperature Visualisation	All units have a digital temperature display on the controller.

Heated Function and Specification (HT Models)

Application	Designed for use with unpacked and packaged product.
Operational Range	Heated cabinets are designed to provide a controlled temperature in the 45-85°C range.
Heating Process	Forced air heated cabinets use a bottom mounted finned element with forced air circulation exhausting into the cabinet through the rear deck and returning through the front deck.
Temperature Measurement and Control	All units supplied with programmable controller with adjustable of offset for measurement and control purposes.
Forced Air Heated Cabinet Controller	Carel - PJ32V0P00
Elements	Sunon, DP200A, Pin 2133*BT

Model	D4HT9	D4HT12
Fans	SUS304, 1500W/240V, Ø8/Ø24* 720mm, Terminal:Screw-Type	SUS304, 2000W/240V, Ø8/Ø24* 1020mm, Terminal:Screw-Type

Installation

D4 Product Range

Heated Special Requirements

Set Up Cabinet Controller For Food	<ol style="list-style-type: none"> 1. Never load product close to the internal air access vents from the pan base or to the return access vents (Never load product or pricing labels over or under air vents). 2. Lift deck plates on a regular basis and clean particle matter to prevent fire hazard. (Warning DO NOT do this whilst cabinet is HOT or POWER is on). 3. Set controller if applicable to match required food standards storage condition. 4. Monitor operation over two seasons and adjust controller settings to match food and environmental conditions. <p>WARNING: Every food group has its own temperature requirements and the cabinet you have purchased has been set up for a generic installation, thus you will need to adjust set points, min/max setting, defrost frequency and duration to your food group and the cabinet environment. It may take two seasons to get the settings correct depending on the range of variances in your environment.</p> <p>Changing product mix within a cabinet or the environmental conditions in which it operates may also require a resetting of operating parameters.</p>
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Controller Programme - Heated

Controller	Instruction
	<ol style="list-style-type: none"> 1. Switch unit on by pressing the power button (separate from the controller). 2. Switch on lights by pressing the light buttons. 3. Change the set point by <ol style="list-style-type: none"> (a) depressing the SET button until the simple 1 is displayed. (b) press the large PROBE/PRG button (c) use the UP (set 1)/DOWN (set 2) buttons to obtain set point desired (Note: Heated cabinets should not be greater than 85 deg C). 4. Press the large PROBE/PRG button to confirm set point.

Lighting (All Cabinets)

Problem	Solution
Ceiling/Column Lights Will Not Work	<ol style="list-style-type: none"> 1. Check that the lights are switched on either on the controller or via separate light switch. 2. Check starters located behind diffusers cover light, replace if necessary. 3. Check light bulbs - replace if necessary.
Shelf Lights Will Not Work	<ol style="list-style-type: none"> 1. Check that the lights are switched on either on the controller or via separate light switch. 2. If column and ceiling lights are working check that the shelf lights have been plugged in and the plug retaining nut has been screwed in. Check starters located behind diffusers cover light - replace if necessary.
Flickering Lights	<ol style="list-style-type: none"> 1. Check starters located behind diffusers cover light - replace if necessary. 2. Check light bulbs - replace if necessary.

Common Operational Troubleshooting

D4 Product Range

NOTE: The C4 product range is designed as display cabinets only - product must enter all cabinets at the correct temperature.

Refrigerated

Problem	Solution
Cabinet will not reach desired temperature	<ol style="list-style-type: none"> 1. Check the set point on the controller and adjust if necessary. 2. Make sure product in cabinet is not blocking air vents, front or back. 3. Check that the evaporator coil is not iced up. If so press manual defrost on the controller and check defrost settings they may need adjusting to current environmental and product conditions. 4. Check that the condensing unit is well ventilated and the front of the condensing coil has access to cool free air). Note : A complete shut down may be required. 5. Check that the condensing unit is working (Note the condenser will not work and the temperature will rise during defrost the display will show "DEF" and will take approximately 20 minutes to return to set point). 6. Check fans are working - replace if necessary. 7. Check the temperature of the rear air vents. <ol style="list-style-type: none"> a. If cold air is coming out of air vents adjust the controller set point to a correct level. b. If air is cool/warm but not cold, request a service agent to check the refrigeration.
Cabinet Temperature Does Not Match Controller	<ol style="list-style-type: none"> 1. Make sure product in cabinet is not blocking air vents or the circulation of air around the controller temperature probe. 2. Check that environmental temperature has not changed. If so adjust controller settings to match changes. 3. Check fans are working - replace if necessary. 4. Adjust controller offset to match average differential over a period of time.
Uneven Cabinet Temperature	<ol style="list-style-type: none"> 1. Make sure product in cabinet is not blocking air vents. 2. Check fans are working - request a service agent to change the fans if necessary. 3. Check that environmental temperatures have not changed - if so correct environmental influences.
Evaporator Icing Up	<ol style="list-style-type: none"> 1. Adjust the defrost settings to match the local environment and the product loading. (Most common adjustment will be an increase in defrost length from factory setting of 8 minutes to 12 minutes).

Heated Forced Air Model

Problem	Solution
Cabinet will not reach desired temperature	<ol style="list-style-type: none"> 1. Check the set point on the controller and adjust if necessary. 2. Make sure product in cabinet is not blocking air vents. 3. Check fans are working - replace if necessary. 4. Check the temperature out of the rear air vents if air is cool/warm but not hot request a service agent to check element. 5. This cabinet has a bimetal switch set at 85 deg C in front of fans; this will cut power to the element if the cabinet set point causes the return air from the cabinet to exceed 85 deg C and will not allow operation until the return air reaches 50 deg. Reduce cabinet set point if set in excess of 90 dec C.
Cabinet Temperature Does Not Match Controller	<ol style="list-style-type: none"> 1. Make sure product in cabinet is not blocking air vents or the circulation of air around the controller temperature probe. 2. Check that environmental temperature has not changed. If so adjust controller settings to match changes. 3. Check fans are working - replace if necessary. 4. Adjust controller offset to match average differential over a period of time.
Uneven Cabinet Temperature	<ol style="list-style-type: none"> 1. Make sure product in cabinet is not blocking air vents. 2. Check fans are working - request a service agent to change the fans if necessary. 3. Check that environmental temperatures have not changed - if so correct environmental influences.

Daily Service



D4 Product Range

WARNING: All procedures require the cabinet to be isolated from the power supply before being carried out. As all units have an electrical component DO NOT soak or spray fluid within or around the cabinets.

Common Procedures

Exterior Cleaning	Use a mild or professional food grade stainless cleaner. Stainless should be cleaned daily using a suitable proprietary stainless steel polish in accordance with the manufacturers' instructions.
Glass Cleaning	All glass should be cleaned using methylated spirits or a quality glass cleaner and a clean cloth. DO NOT clean glass with abrasive pads or cleaners (eg Scotchbrite pads or Jif) - this will damage the glass.
Interior Cleaning	<p>Brush crumbs to end of door tracks using a small paintbrush.</p> <p>Fan/Element Deck The fan/element deck can be lifted up and rested on top of cooling coils to enable cleaning around the coils. Take care not to stretch fan leads or damage coil fans.</p> <p>To avoid possible damage when replacing the fan decks be sure that leads are not trapped by metal parts.</p> <p>DO NOT spray water inside cabinet as an electrical short may occur.</p> <p>Cooling Fans If there is food stuck in the cooling fins it is best to use a wet and dry vacuum cleaner to suck out the food. DO NOT attempt to hose food parts from fins.</p> <p>Caution : The fins are very sharp. Take extra care when cleaning this area. Do not bend the fins over as this will restrict the airflow and degrade cabinet performance.</p> <p>Trays, Shelves and Air Grills Stainless trays and nickel racks should be cleaned with hot soapy water. Do not use abrasive pads or cleaners as they may damage surfaces.</p>





Common Servicing - Electrical

Item	Instruction
Access to electrical controls, ballasts etc.	<ol style="list-style-type: none"> 1. Remove screws from roof of cabinet, located top and rear and remove ceiling. 
Removing the controller	<ol style="list-style-type: none"> 1. The controller can be removed by clipping off the end trim on the controller the removal of the two retaining screws. 2. Pull controller out as far as the cable will allow and remove cable connections.
Ballast/Distribution Tray Removal	<ol style="list-style-type: none"> 1. Remove the roof and disconnect the cables labelling them as they are disconnected. 2. Remove tray screws (make sure on replacement of tray it is re-screwed to the cabinet to ensure proper earth connection is established). 

Servicing





D4 Product Range

Common Servicing - Glass




Item	Instruction
Removing Doors	<p>1. Light glass door and swing out at base.</p>  
Removing Side Glass	<p>1. Remove rubber seals around glass inside cabinet. 2. Unscrew rear column cover then unscrew side top end cap. 3. Remove rubber packers at column end of glass. 4. Slide glass back towards column face until it is clear of front trim. 5. Tilt glass out at top and lift out.</p>  
Removing Solid Front Glass	<p>1. Remove rubber seals around glass inside and outside of cabinet. 2. Remove one end glass panel. 3. Remove angled glass retainer fixed inside roof of cabinet. 4. Lift glass up and swing bottom of glass into cabinet and then lower glass out of top track. 5. Remove glass out of open end of cabinet.</p>

Servicing

D4 Common Servicing - Glass

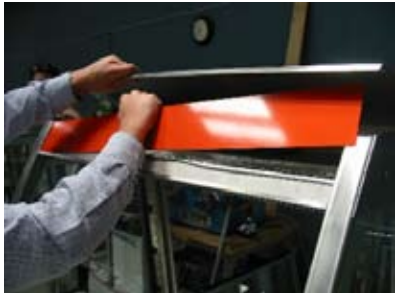


Item	Instruction
<p>Removing and installing shelves with lights</p>	<ol style="list-style-type: none"> 1. Place shelf in cabinet (if a number of shelves are to be installed place all shelves in cabinet on lower deck). 2. Remove the column light connection protection cap. 3. Connect the light cable to the column light connection by inserting into light socket and rotating locking screw. 4. Lift and insert shelf into desired slots in column. 5. Follow this procedure until all shelves are installed. <div style="display: flex; justify-content: space-around;">   </div>
<p>Changing light bulbs and starters</p>	<ol style="list-style-type: none"> 1. For ceiling lights remove diffuser cover by squeezing it and lift it out of cabinet. 2. For shelf lights remove shelf from cabinet and remove diffuser cover by squeezing it and lift it out of channel. 3. Lift light out of retaining clips. 4. For light replacement pull power supply end caps off bulbs. 5. For starter removal rotate starter and remove from mounting. <div style="display: flex; justify-content: space-around;">   </div>

Common Servicing - Fans

Item	Instruction
<p>Servicing Fans</p>	<ol style="list-style-type: none"> 1. Remove deck tray in cabinet. 2. Lift out fan box in cabinet and discount power supply by unplugging connectors under fan box. <div style="display: flex; justify-content: space-around;">   </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;">  </div>

Common Servicing

D4 Product Range - Coloured Panels

Item	Instruction
Replacing Panels	<p>Top Panel - Remove top roof panel by undoing screws. Lift top and slide out colour panel.</p>  <p>Base Panel - Slide up base colour panel and pull bottom forward. Drop colour panel out from top track.</p>  

Refrigerated

Item	Instruction
Access to evaporator coil and capillary tube	<ol style="list-style-type: none"> 1. Access to the evaporator coil and capillary tube is obtained by following the same steps as obtaining access to the fans. 2. Peel back the ceiling insulation (ensure the insulation is fully replaced on completion of service). 3. Lift the coil cover.

Condensor Cleaning

Item	Instruction
<p>Access to evaporating coil for cleaning.</p> <p>NB Evaporator should be cleaned bi-monthly.</p>	<ol style="list-style-type: none"> 1. Remove front grill by lifting up and out. 

Servicing

D4 Product Range

Common Servicing - Heated Forced Air

Item	Instruction
Replacing Heating Elements	<ol style="list-style-type: none">1. Access to the heating element is obtained by removal of the pan cover as per the fan instruction.2. Remove fixing of the element housing.3. Remove the power connections to the element.4. Remove the element retaining nut.  
Access to Bimetal Safety Switch	<ol style="list-style-type: none">1. Access and replacement of the bimetal switch is obtained via the same method as replacing an element.

Common Servicing - Shelf Adjustment

Item	Instruction
Shelf Adjustment - Shelves Can Be Either Flat Or Angled	<ol style="list-style-type: none">1. Remove racks and ticket strips.2. Lift up from back of shelf arms at either end.3. Pull forward until 2nd slot appears and lock into place.  