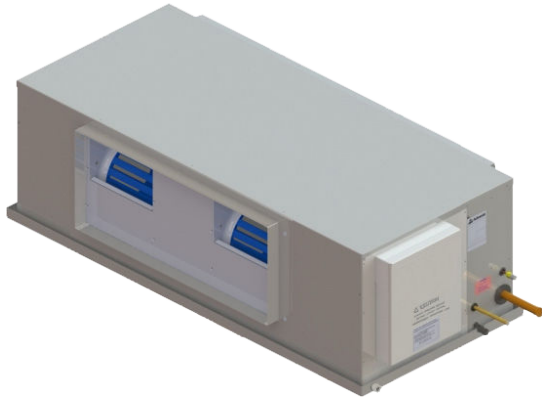


# R-32 Ducted Systems

## Owner's Manual



### Model Numbers:

CRV13AS / EVV13AS  
CRV15AS / EVV15AS  
CRV17AS / EVV17AS  
CRV13AT / EVV13AS  
CRV15AT / EVV15AS  
CRV17AT / EVV17AS

### Two Piece Fan Coil:

EAA13AS and EFV13AS  
EAA15AS and EFV15AS  
EAA17AS and EFV17AS

### **IMPORTANT NOTE:**

Please read this manual carefully before operating your air conditioning unit.

*That's better. That's Actron.*



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### WARNING

#### KEEP OUT OF REACH OF CHILDREN

Contains button or coin cell battery. Hazardous if swallowed. Swallowing can lead to chemical burns, perforation of soft tissue and death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.

## 01. General Information

CONGRATULATIONS on your purchase of an ActronAir air conditioning unit! This unit has been designed and engineered to provide optimum air conditioning and to achieve maximum energy efficiency.

Your air conditioning system has been manufactured from the highest quality materials. Numerous “in house” and “external” inspections and test procedures were conducted to your air conditioning unit to ensure satisfactory operation.

This guide provides operation instructions specific to your split ducted unit. Read this manual thoroughly to ensure safe operation of your air conditioning system.

## 02. Safety Instructions

- Only licensed HVAC technicians\* should service this air conditioning equipment. Improper service or alteration by an unqualified technician could result in significant and major damage to the product or property which may render your warranty null and void. Such unqualified service could also lead to severe physical injury or death. Follow all safety instructions in this literature and all warning labels that are attached to the equipment.
- This appliance is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely. Young children should be supervised to ensure that they do not play with the appliance.

\*Qualifications required will be appropriate Electrical, Refrigeration and Refrigerant Handling License and Training dependent on local State/Territory regulations.



### DANGER

#### **Hazardous Voltage - Risk of Electrocutation.**

Turn Off the power from main isolator before proceeding with any service and maintenance work of the unit. Observe proper LOCK-OUT/TAG-OUT (LOTO) procedures for electrical appliances in order to prevent accidental switching-on of the power supply. Extreme care and caution must be observed should there be a need to work on live circuit.



### WARNING

- If any abnormal situation arises (like burning smell), turn off the power supply and call your HVAC technician for instructions to avoid electric shock, fire or injury.
- DO NOT let the indoor unit or the controller get wet. It may cause electric shock or fire.
- DO NOT insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- DO NOT use a flammable spray such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.



### CAUTION

- DO NOT inspect the unit by yourself. Ask a qualified HVAC technician to perform the inspection.
- To prevent product deterioration, do not use the air conditioner for preservation purposes (storage of food, plants, animals, works of art, etc.).
- DO NOT operate the air conditioner with wet hands. It may cause electric shock.
- DO NOT climb onto or place objects on top of the outdoor unit.
- DO NOT remove any fixed covers on the indoor or outdoor unit.
- DO NOT operate the air conditioner without the return air filters in place.



### WARNING

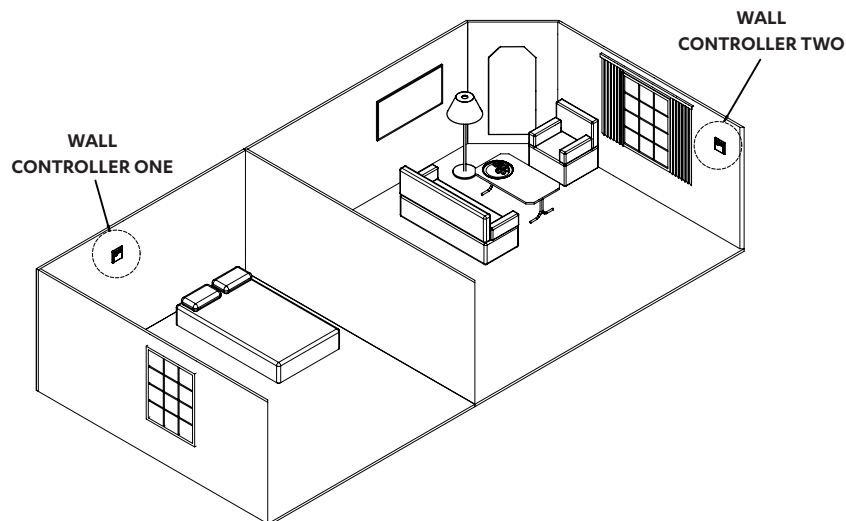
This air-conditioning unit contains R-32 refrigerant (Class A2L) which is mildly flammable. Installation, service, maintenance and decommissioning of this unit must be performed by a licensed HVAC technician; qualified to handle R-32 refrigerant.

### 03. Unit Features

<b>Auto-Restart After Power Failure</b>	If the unit loses power, it will automatically restart with prior settings, once power has been restored.
<b>Multiple Wall Controller Operation (Optional)</b>	Up to three wall controllers can be installed on one system. This is particularly useful for larger houses, where you can have controls in different locations or if multiple sensing points are required.
<b>Room Temp Display with One Touch</b>	Simply press <b>SELECT UP</b> or <b>DOWN</b> button and the set temperature display will change to show the room temperature for 3 seconds. Note: When zone sensors are fitted, the temperature displayed will depend on which sensor has been selected by the wall controller (only applicable to LR7 and LC7-2).
<b>Sense More Technology</b>	Sense More technology means ActronAir systems come with more temperature sensing points, which allows them to evenly maintain the temperature throughout your home no matter the time of day.
<b>Auto Defrost Function (HEATING Mode)</b>	At certain outdoor conditions (low temperature) frost may build up on the outdoor heat exchanger. This gradual build up of frost reduces the performance of the air conditioner. The microprocessor detects this frost build up and will automatically activate the <b>DEFROST</b> mode. The <b>DEFROST</b> mode is displayed on the wall controller by flashing the <b>HEAT</b> symbol every 10 seconds.
<b>Hot Start Function (HEATING Mode)</b>	When the air conditioner starts in <b>HEATING</b> mode, the indoor fan is delayed for a short period of time, this allows the heat exchanger to warm up before the air starts to flow, thus preventing excessive cold drafts. The hot start feature also activates itself when the system finishes a defrost cycle.
<b>Filter Clean Light</b>	The microprocessor monitors the accumulated run time of the air conditioner and after a preset number of hours has passed, the <b>FILTER</b> light will flash, indicating it is time to check if the filter needs cleaning. Note: Only applicable to ActronAir wall controllers.
<b>Self Diagnosis</b>	In the unlikely event that a fault develops with the air conditioner the microprocessor will diagnose the fault (where possible) and display a fault code on the wall controller.

**NOTE**

Refer to individual wall controller owner's manuals for a full list of features.



## 04. Tips on Using the Air Conditioner

### 04.01. Operating Tips for Summer

It is recommended to test run your air conditioner a few weeks before the start of summer and make sure it is cooling sufficiently. If the air conditioner needs servicing, we advise you to have this done before the summer season arrives.

#### **A hot day is forecast for tomorrow, what should you do?**

Always start the air conditioner early in the morning and keep the house/office cool. If you try and start the air conditioner in the afternoon when the house/office is already very hot, it may take a while to cool down. Keep all curtains and windows closed. Also stop drafts coming in from outside.

If zones have been installed you should turn off any zone that is not being occupied. This will allow higher cooling capacity for the occupied areas.

Ask your installer for any zoning limitations for your system.

#### **NOTE**

Always allow the necessary amount of fresh air into rooms.

### 04.02. Operating Tips for Winter

It is recommended to test run your air conditioner a few weeks before the start of winter and make sure it is heating sufficiently. If the air conditioner needs servicing, it is advised you have this done before the winter season arrives.

#### **A cold day is forecast for tomorrow, what should you do?**

You can leave the air conditioner running overnight, but lower the set point 2-4°C from your normal setting to help reduce power consumption. This will assist the house/office from becoming too cold overnight and thus enabling the air conditioner to warm the house/office quicker when you raise the temperature set point back to your usual setting.

OR

Start the air conditioner a couple of hours earlier than you normally would in the morning. If outside conditions are very cold (approximately 7°C or lower) supplementary heating may be used such as electric or gas heaters to complement and speed the heating up. This can be done by setting an ON timer prior to going to bed.

Keep all curtains and windows closed. Also stop drafts coming in from outside. When operating your system overnight or when the home/office is unoccupied, it is recommended on heating mode to turn the wall controller temperature down by 2-4°C. Alternatively when operating your system in cooling mode to turn the wall controller temperature up by 2-4°C. This will help to reduce power consumption.

Ask your installer for any zoning limitations for your system.

#### **NOTE**

Always allow the necessary amount of fresh air into rooms.

### 04.03. Energy Conservation Tips

For the most efficient operation, keep the windows and doors closed including unused areas where possible. This approach not only helps to insulate against heat and cold, it also reduces dust, pollen and noise. Occasionally allow fresh air into rooms and offices that are closed off. When operating your system overnight or when the home/office is unoccupied it is recommended in heating mode to turn the wall controller temperature down by 2-4°C. Alternatively when operating your system in cooling mode to turn the wall controller temperature up by 2-4°C. This will help to reduce power consumption.

The normal wall controller setting recommended is 22°C for summer and winter.

By raising the set point by 1°C in summer or lowering the set point by 1°C in winter, you can save approximately 10% on electricity costs.

If your air conditioner has zones fitted, always turn off the zoned areas that are unoccupied.

## 05. Care and Maintenance

### Wall Controller

Wipe the controller with a dry cloth. Do not use water.

### Outlets and Return Air

Dust off the outlets and return air. Do this regularly to prevent the build up of dust or dirt.

### Air Filter Cleaning

Clean every 12 weeks or when the filter light is displayed on your wall controller.

#### NOTE

In dusty environments the filter may require more regular cleaning.

1. Turn the air conditioner off from the wall controller.
2. Open the inlet grille. Be cautious, dust may fall from return air grille.
3. Remove the filter by sliding it from the grille.
4. Clean the filter by using a dust pan brush to remove the dust or wash the filter with water. Be gentle when cleaning the filter to avoid tearing of the filter material.
5. Re-install the filter.

#### NOTE

- When the filter light is flashing, check the air filter and clean if necessary and press the ON/OFF button to extinguish filter light.
- Always check with your installer for the proper care and maintenance of the filter system.
- Do not obstruct airflow.
- Keep grass or plants away from the unit. This will ensure that your air conditioner operates efficiently.
- It is recommended to have your filter material changed every 12 months on the annual maintenance.

### Air conditioner not in use for long periods of time (eg. 2-4 weeks)

Power is used even when the system is not operating. The air conditioner should be switched off from the main circuit breaker when it is not being used for long periods of time, for example, when going on holidays etc. If the system is switched off for greater than 8 hours, it is recommended to not turn the system back from the wall controller for a minimum of two hours after the main circuit breaker is turned on.

#### NOTE

All general maintenance and care of systems should be undertaken by a licensed technician.

### Maintenance Procedures

This section describes the procedures that must be performed as a part of normal preventive maintenance. Regular servicing of equipment by a licensed technician is highly recommended. Regular servicing of your unit helps in maintaining its optimum performance and reliability. **The checklist and service periods provided on this manual are guides only, as some sites may require more frequent servicing.** Always disconnect electrical power to the unit before performing these procedures. It is always a safe practice to observe all safety warnings and cautions when conducting maintenance tasks.



#### DANGER

##### Live Electrical Connections!

It may be necessary to work with live electrical components on certain maintenance tasks. Only licensed electricians and qualified technicians are allowed to perform these tasks.



#### CAUTION

##### Beware of Rotating Fan Blades!

Always make sure that all power supply, to the Outdoor Fans are turn Off and isolated.

Observe WH&S safety procedures, do not wear loose clothing and any jewellery when working near the fans.

Wear PPE whenever performing any maintenance procedures.

Observe all necessary procedures when working in a confined space.



#### WARNING

##### Hazardous Voltage !

Always make sure that all power supply, including remote controls, are disconnected before performing maintenance.

Observe proper LOCK-OUT/TAG-OUT procedures to ensure that power cannot be inadvertently energised. Failure to disconnect power before maintenance procedures can result in serious injury and/or death.

This unit is charged with R-32 mildly flammable refrigerant.

## 06. Maintenance Frequency Checklist

Regular servicing of equipment by a qualified technician is recommended every 12 months for residential applications and every quarter for commercial applications. Regular servicing of your unit helps in maintaining its optimum performance and reliability. **The following checklist and service periods are provided as a guide only, as some sites may require more frequent servicing.** Filter cleaning can be carried out by the home/office owner.

ELECTRICAL									
Parts	Service Period					Detail of Service Check	Service Methods		
	1 Mth	3 Mth	6 Mth	1 Yr	2 Yrs			3 Yrs	4 Yrs
Printed Circuit Boards				✓		Visual Inspection	Tighten Terminals as necessary on printed circuit boards		
Electrical Connections				✓		Check all electrical terminals, mains, communications, etc	Re-tighten if loose.		

INDOOR UNIT									
Parts	Service Period					Detail of Service Check	Service Methods		
	1 Mth	3 Mth	6 Mth	1 Yr	2 Yrs			3 Yrs	4 Yrs
Casing / Panels and Frames				✓		Visual check for damage, rust and dust accumulation.	For highly corrosive environment, wash panels quarterly with water and neutral detergent solution. Wax panels. Repair/re-paint where required.		
Insulation				✓		Visual check for insulation conditions.	Repair/replace insulation material.		
Fan				✓		Visual check for run out of balance and dust attached	Clean off dust as necessary to negate possibility of fan running out of balance		
Motor				✓ Ω		Visual check on wiring. Insulation resistance check to be carried out annually	Measure insulation resistance. Should be more than 1MΩ		
Heat Exchanger				✓		Check for clogging by dust. Check for leaks/damage.	Clean air inlet side as necessary. Straighten any bent fins using fins comb.		
Drain Pan/ Condensation line				✓		Check for obstructions and free flow of water	Clean to eliminate obstructions/sludge and check condition of pan. Pour water to ensure free flow.		
Filter*		✓				Check for clogging by dust.	Clean Filter		
Temperature Readings				✓		Measure air on and air off	Place temperature probe in return and supply air of unit.		
Zone Motors				✓		Visual inspection of motors open/housing. Ensure no obstructions	Drive motors opened and closed. Ensure correct operation.		
Duct Works				✓		Inspect duct works for air gaps.	Re-tape any loose ducts.		

\* Service period for filter cleaning may vary depending on operating time and surrounding environment



OUTDOOR UNIT										
Parts	Service Period								Detail of Service Check	Service Methods
	1 Mth	3 Mth	6 Mth	1 Yr	2 Yrs	3 Yrs	4 Yrs	5 Yrs		
Casing / Panels and Frames				✓					Visual check for damage, rust and dust accumulation.	For highly corrosive environment, wash panels quarterly with water and neutral detergent solution. Wax panels. Repair/re-paint where required.
Insulation				✓					Visual check for insulation conditions.	Repair/replace insulation material.
Fan				✓					Visual check for run out of balance and dust attached	Clean off dust as necessary to negate possibility of fan running out of balance
Motor				✓ Ω					Visual check on wiring. Insulation resistance check to be carried out annually	Measure insulation resistance. Should be more than 1MΩ
Heat Exchanger				✓					Check for clogging by dust. Check for leaks/damage.	Clean air inlet side as necessary. Straighten any bent fins using fins comb.
Condensate Drain Line (if available)				✓					Check for obstructions and free flow of water	Clean to eliminate obstructions/sludge and check condition of drain line. Pour water to ensure free flow.
Compressor				✓ Ω					Check for high/low pressure. Measure insulation resistance. Check compressor for abnormal noise/vibrations	Measure insulation resistance. Should be more than 1MΩ.
Refrigeration Operational Readings				✓					Make note of operational reading in test cool/heat	Check operating pressures, record superheat and subcooling values
Safety Devices				✓					Check calibration of safety devices such as HP and LP controls, sensors, etc	Check resistance of sensors, pressure cut in/cut out of pressure controls
Faults				✓					Check for any previous fault history on unit.	Investigate any causes for previous faults, reset fault history.

See [actronair.com.au/faqs/](http://actronair.com.au/faqs/) for more information regarding FAQ's and Maintenance

## 07. Troubleshooting



### SAFETY PRECAUTIONS

If ANY of the following conditions occurs, turn off your unit immediately!

- You smell a burning odor
- The unit emits loud or abnormal sounds
- A power fuse blows or the circuit breaker frequently trips
- Water or other objects fall into or out of the unit

**DO NOT ATTEMPT TO FIX THESE YOURSELF! CONTACT Authorised SERVICE PROVIDER IMMEDIATELY!**

The following problems are not a malfunction and in most situations will not require repairs.

Fault	Possible Causes
<b>Unit does not turn on when pressing ON/OFF button</b>	<ul style="list-style-type: none"> <li>• Check that 5 minutes has passed from turn on time, as the system has inbuilt safety timers.</li> <li>• Check if thermostat settings are correct.</li> <li>• Check the thermostat set point is set low enough for cooling or high enough for heating.</li> </ul>
<b>Outdoor units emit mist</b>	<ul style="list-style-type: none"> <li>• When the unit restarts in <b>HEAT</b> mode after defrosting, mist may be emitted due to moisture generated from the defrosting process.</li> </ul>
<b>The unit makes noises</b>	<ul style="list-style-type: none"> <li>• Low hissing sound during operation: This is normal and is caused by refrigerant gas flowing through both indoor and outdoor units.</li> <li>• Low hissing sound when the system starts, has just stopped running, or is defrosting: This noise is normal and is caused by the refrigerant gas stopping or changing direction.</li> <li>• When the unit starts, the outdoor unit may be louder than normal for a few seconds, whilst the compressor reaches the designated speed and operation pressures.</li> </ul>
<b>The outdoor unit makes noises</b>	<ul style="list-style-type: none"> <li>• The unit will make different sounds based on its current operating mode.</li> </ul>
<b>Dust is emitted from either the indoor or outdoor unit</b>	<ul style="list-style-type: none"> <li>• The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.</li> </ul>
<b>The unit emits a bad odor</b>	<ul style="list-style-type: none"> <li>• The unit may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operations.</li> <li>• The unit's filter have become moldy and should be cleaned.</li> <li>• The indoor drain line P-trap may have dried out.</li> </ul>
<b>The fan of the outdoor unit does not operate</b>	<ul style="list-style-type: none"> <li>• The indoor room temperature has reached the set temperature. During operation, the fan speed is controlled to optimize product operation.</li> </ul>
<b>Air does no flow from the indoor unit</b>	<ul style="list-style-type: none"> <li>• Check Zones are switched on.</li> <li>• During heating operation, air does not flow for approximately 15 seconds after start up or during defrost, this reduces cold drafts.</li> </ul>
<b>Cooling/Heating is not sufficient</b>	<ul style="list-style-type: none"> <li>• Return Air Filter is clogged with dust and dirt.</li> <li>• Air inlet and air outlet on the outdoor unit are blocked.</li> <li>• Outside temperature is above or below the design conditions.</li> </ul>

### NOTE

If your problem persists after performing the checks and diagnostics above, turn off your unit immediately and contact ActronAir on 1800 119 229 for technical support or warranty. Please have the Model and Serial number of your outdoor unit readily available.

Please check the following points before contacting a qualified service technician.

<b>Fault</b>	<b>Possible Causes</b>	<b>Remedies</b>
<b>Poor cooling performance</b>	Temperature setting may be higher than ambient room temperature.	Lower the temperature setting.
	The heat exchanger on the indoor or outdoor unit is dirty.	Contact a qualified service technician.
	The air filter is dirty.	Remove the filter and clean it according to instructions.
	The air inlet or outlet of either unit is blocked.	Turn the unit off, remove the obstruction and turn it back on.
	Doors and windows are open.	Make sure that all doors and windows are closed while operating the unit.
	Excessive heat is generated by sunlight.	Close windows and curtains during periods of high heat or bright sunshine.
	Too many sources of heat in the room (people, computers, electronics, etc.).	Reduce amount of heat sources.
	Low refrigerant due to leak or long-term use.	Contact a qualified service technician.
<b>The unit is not working</b>	Power failure.	Wait for the power to be restored.
	The power is turned off.	Turn on the power.
	The unit's 5 minute protection has been activated.	Wait 5 minutes after restarting the unit.
	Timer is activated.	Turn timer off.
<b>The unit starts and stops frequently</b>	There is too much or too little refrigerant in the system.	Contact a qualified service technician.
	The voltage is too high or too low.	Contact a qualified service technician.
<b>Poor heating performance</b>	The outdoor temperature is too low.	Operate system at a lower set temperature, then gradually increase set temp to desired level.
	Cold air is entering through doors and windows.	Make sure that all doors and windows are closed during use.
	Low refrigerant due to leak or long-term use.	Contact a qualified service technician.
<b>Indicator lamps continue flashing</b>	<p>The unit may stop operation or continue to run safely. Some error codes will allow the unit to continue operating. If the indicator lamps continue to flash or error codes appear, wait for about 10 minutes. The problem may resolve itself.</p> <p>If not, disconnect the power, then connect it again. Turn the unit on.</p> <p>If the problem persists, disconnect the power and contact a qualified service technician.</p>	
<b>Error code appears on the controller: E(xx)</b>		

**NOTE**

If your problem persists after performing the checks and diagnostics above, turn off your unit immediately and contact ActronAir on 1800 119 229 for technical support or warranty. Please have the Model and Serial number of your outdoor unit readily available.



# ActronAir

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