DC-3
SMART REFRIGERATION
The DC-3 is a revolutionary system which will redefine our industry with a plug and play solution for walk in/reach in cool rooms.

Its birth began with Actrol drawing on the expertise of four world renowned organisations to work together to produce what we now know as the DC-3 Smart Refrigeration System. Siam Compressor Industries supply the brushless DC scroll compressor, Carel provide the electronic controls, Tecumseh manufacture the condensing unit, and Cabero supply the uniquely specified evaporator fitted with EVD ice.
DC compressor technology greatly reduces energy use and outdoor noise.

EVAPORATOR
INDOOR
Factory fitted with EVD-Ice enables more accurate superheat control, defrost on demand and optimised defrost termination. Fast clips make end panel access easy with no screws to drop.

ROOM CONTROLLER
The intelligent room controller communicates with the indoor and outdoor unit in real time to achieve smooth line temperature control.

PACKAGED UNIT
OUTDOOR
DC compressor technology greatly reduces energy use and outdoor noise.
## Features and Benefits

<table>
<thead>
<tr>
<th>DC-3 SMART REFRIGERATION IS A GREAT CHOICE FOR CONTRACTORS</th>
<th>DC-3 SMART REFRIGERATION PROVIDES MANY BENEFITS FOR THE COLD ROOM USER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to select, install and commission saving you time to spend on your next job.</td>
<td>Approximately 30% less energy consumption for quicker return on investment.</td>
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<td>System arrives in a two-box kit ensuring you won’t need a return trip to the wholesaler.</td>
<td>Smooth line temperature control resulting in extended shelf life of perishable foods.</td>
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<td>Condensing unit display shows real time system information, so you know exactly what is happening as it’s happening.</td>
<td>Quieter system with low noise outside thanks to the modulating fans and compressor.</td>
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<td>Smart Refrigeration Technology ensures higher heat exchange efficiency, adequate oil return, and safety controls to ensure the compressor operates within its design envelope.</td>
<td>Flexible capacity range means you have room to move with your cool room layout in future</td>
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<tr>
<td>Easy maintenance with vital signs shown in plain English on condensing unit display.</td>
<td>Safety mode ensures continuous cooling if communication between components is lost.</td>
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Easy to Select

Model selection is easy as there are only two steps.

1. SELECT THE MODEL THAT COVERS THE REQUIRED REFRIGERATION CAPACITY.

2. SELECT A ‘GENERAL PURPOSE’ OR ‘HIGH HUMIDITY’ KIT DEPENDING ON THE STORAGE REQUIREMENTS OF THE PRODUCTS BEING COOLED.

The ‘General Purpose’ kit is designed for packaged products that are vapour sealed such as bottled beverages and plastic wrapped foods. The ‘High Humidity’ kit is designed for fruit and vegetables, meat, fish and food processing where products have a high moisture content. This kit includes a larger evaporator.

DC-3 Refrigeration Capacity Range

<table>
<thead>
<tr>
<th>Model</th>
<th>Capacity Range</th>
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<tbody>
<tr>
<td>APDC8.5M2—1</td>
<td>1.7kW — 10.1kW</td>
</tr>
<tr>
<td>APDC21.4M3—1</td>
<td>3.2kW — 25.7kW</td>
</tr>
</tbody>
</table>

Example A

A cool room has a requirement for 4 kW of refrigeration

— DC-3 model APDC8.5M2-1 will satisfy this requirement.
— Select either the ‘General Purpose’ or ‘High Humidity’ kit to suit the products being stored.

Example B

A cool room has a requirement for 12 kW of refrigeration

— The DC-3 model APDC21.4M3-1 will satisfy this requirement.
— Select either the ‘General Purpose’ or ‘High Humidity’ kit to suit the products being stored.

Example C

A cool room has a requirement for 22 kW of refrigeration

— The DC-3 model APDC21.4M3-1 will satisfy this requirement.
— Select either the ‘General Purpose’ or ‘High Humidity’ kit to suit the products being stored.
Easy to Install

With this revolutionary plug and play technology, installation is incredibly simple.

Easy to Commission

A start up wizard is used to enter the site-specific parameters so the system will operate correctly.

The start up wizard is accessed from the DC-3 room control.
Commercial customers usually have two types of charges on their electricity account.

The first of these is the energy charge which is calculated by multiplying the total energy use (kWh) by the energy rate per kWh.

The second is a demand charge which is calculated by using the largest kW consumption of any 15-minute period of the billing cycle. This peak kW level is multiplied by a specific rate set by the utility company. Peak demand often makes up a significant portion of a commercial electricity bill.

DC-3 Smart Refrigeration uses sophisticated algorithms to smooth line the room temperature and the energy consumption.

Traditional on/off refrigeration systems allow the room temperature to rise above the set point and then work at 100% to bring the temperature down, causing spikes of energy use. These spikes often result in higher demand charges.