



## Retail Refrigeration: Our guide to energy saving opportunities

In current economic and climate change conditions, it is essential that all refrigerated display and storage equipment uses the least amount of energy and works to maximum efficiency 24 hours a day. Keeping energy consumption down will help to save money, build business reputation and fight against climate change.

### Refrigeration Display: Are you getting the best from your existing equipment?

Open display cabinets such as Serve Over Counters, Multidecks and Grab & Go cabinets usually use the most energy.

How best to reduce the energy consumption of existing cabinets:

- ✓ Adding aerofoil guides to Multideck shelves helps reduce cold air loss, saving between 10-20% energy
- ✓ Emptying and turning off equipment overnight or ensuring night blinds are fitted can reduce energy costs by up to 35%
- ✓ Adding strip curtains or transparent doors can save energy in the range of 5-30%
- ✓ Regular condenser cleaning, maintenance and servicing can save energy consumed by up to 10%
- ✓ Turn off cabinet lights overnight and replace fluorescent bulbs with LED strip lighting
- ✓ Check with your Service Engineer whether the cabinet defrost settings are appropriate for shop conditions
- ✓ Consider replacing existing fan motors with lower power/high efficiency EC alternatives



*Even a small reduction in energy consumption can offer significant savings*

### Cold Rooms and Storage: How can you reduce energy consumption?

Usually the main cause of inefficiency in a cold/freezer room comes from external influences such as warm air, products, equipment and people entering in from outside. Refrigeration systems are generally designed to hold food and drink products at the right temperature.

The warmer the temperature becomes inside, the harder the refrigeration system has to work to reduce temperature and maintain the set point. Many aspects of improving chilled display equipment efficiency can be applied to chilled storage, so, what else should be considered?



- ✓ For cold rooms, look at door management procedures, self-closing mechanisms and strip curtains
- ✓ Doors need to be kept closed with door seals checked, cleaned and replaced regularly
- ✓ Check for small airgaps between cold room panels, wall mounted systems, refrigeration pipework and drainage
- ✓ Maintain and repair all wall panel joints and seals to prevent air seepage
- ✓ Regular compressor and evaporator checks are essential as undercharged systems can increase energy consumption by up to 15%
- ✓ As part of your routine annual maintenance and service activity, ask your Refrigeration Engineer to thoroughly clean the condensers
- ✓ Ensure carcasses, boxes and rails are not obstructing the evaporators and preventing good internal airflow
- ✓ Cleaning and maintenance guidelines can be found in the Manufacturer's Operating Manual or take a look at the guide we have prepared [www.angelrefrigeration.co.uk/cleaning-maintenance/](http://www.angelrefrigeration.co.uk/cleaning-maintenance/)

**Sourcing products from manufacturers where a responsible approach for the environment is evident**



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## Refrigeration equipment to transform your business



### Did you know that overloading equipment will cause the refrigeration systems to work harder to reach the required temperature?

It is also important to prevent all chilled and frozen products from warming during transfer, as this will increase the temperature inside the cabinet, putting all products at risk. The Food Standards Agency provides helpful information on how to transport and store chilled and frozen products.

*Avoid wasting energy by setting the temperature lower than the recommended set point.*

### When does replacing old with new equipment make sense?

The greatest financial savings can often be made by investing in equipment using the latest technology with environmentally friendly refrigerants. When compared to the higher energy consumption of older equipment, the added costs of energy saving modifications and the potential ongoing repairs, new equipment can provide a better return on investment. Here are the features that we feel you should be looking for when selecting new commercial refrigeration.

### Our Checklist for Selecting New Commercial Refrigeration



- ✓ Read the details on an EU Energy Efficiency Class label to identify the best products
- ✓ Where possible choose the R290 GREEN Environmentally friendly refrigerant
- ✓ Equipment with intelligent controllers and low energy modes help save money
- ✓ High density insulation panels help prevent thermal transfer
- ✓ Choose equipment where the condensers are easy to reach and clean
- ✓ Upright cabinets with split doors can be a benefit in warm humid kitchens
- ✓ Doors with self-closing mechanisms help reduce the risk of doors being left open
- ✓ Multidecks with glass doors must now show a minimum efficiency rating of 'D'



max energy efficiency



Energy Efficiency Class \*

**Recommendation:** Take a look at this Coreco High Efficiency Multideck with glass doors. Energy Class B, supplied with an inverter compressor, R290 refrigerant, electronic fans and low noise components.



CHDGO 12 HE



Since January 2021, new refrigerated display cabinets must comply with the **EU Energy Efficiency Index**. The labels provide an indication of annual power consumption, compared with a reference consumption based on volume and the appliance type.

Have you seen the Carbon Trusts **Energy Technology List**? Choosing equipment from this list ensures you are purchasing equipment which is among the most efficient in its class. [www.gov.uk/guidance/energy-technology-list](http://www.gov.uk/guidance/energy-technology-list)



As part of our ongoing commitment to the environment, Angel Refrigeration has been working with our suppliers to develop a wide range of energy efficient refrigeration in line with the Carbon Trust standards. The Carbon Trust provides a wealth of advice to help businesses take action to reduce carbon emissions for both existing and new equipment [www.carbontrust.com](http://www.carbontrust.com)

**Angel Refrigeration will help you find the right energy efficient refrigeration solutions for your business**