New **regulatory changes** for refrigeration

2021 UPDATE

ARE YOU READY?

Three things to know about professional refrigeration in 2021

Major regulatory changes under EU and UK legislation have come into effect, impacting every food service and hospitality operator, and more will follow very soon.

1 **Access to information for all**

EPREL, the official European database on energy-labeled products, is a storehouse of information all kept in one place. By scanning QR codes on new labels, consumers can access more information about the product.

P. 2

2 **Compulsory labels for more equipment**

Up until now, energy labels were only required on vertical units and refrigerated counters, which are usually found in commercial kitchens. From here on in, labels will also be compulsory on other commercial appliances, including the glass door refrigerators and open refrigerated cabinets used in the retail sector.

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3 **F-Gas Regulation: Phase-down of harmful refrigerants now underway**

This European regulation aims to reduce greenhouse gas emissions generated by refrigerants used in heating and cooling applications, including commercial refrigeration equipment. On January 1, 2020, a new measure implemented under the regulation banned the sale of new equipment using R404A, a refrigerant with very high global warming potential. If you're planning new purchases for 2021, keep in mind that the sale of new refrigerators using R134a will also be banned as of January 1, 2022.

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BE READY

true REFRIGERATION

Access to information for all

Since January 1, 2019, manufacturers have been required to register their products in the European Product Database for Energy Labeling (EPREL) in order to sell them on the European market. In commercial refrigeration, labeling was only compulsory for kitchen refrigerators and freezers equipped with full doors and drawers. Now it is required for glass-door refrigerators and open refrigerated cabinets.

What is changing:

Information that everyone can access. As of March 1, 2021, individuals and professionals will have access to the EPREL site by scanning the QR code, providing more information on the product before you buy.

Test standards for labeling are getting tougher. Manufacturers wishing to register a product in EPREL must prove that it is CE certified and provide test results from an accredited source. In other words, products must meet minimum energy and performance criteria to have a place on the market.

Products not listed in EPREL have not been vetted by the authorities.
They aren't guaranteed to meet minimum energy standards for commercial refrigeration equipment, and therefore can no longer be sold. If no label for a product can be found, then questions should be asked why.

The EPREL service which launched March 1st 2021 is not a traditional website that the consumer can visit. It is not a searchable database of product listings where different models can be easily compared.

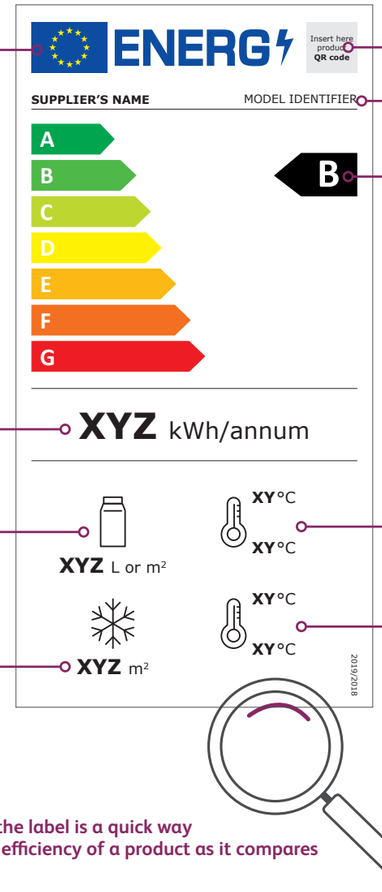
Instead, it is only accessible through scanning the QR code on an applicable label. This takes you directly to the page on EPREL for that specific product, where additional information to what is on the label can be reviewed.

« True is in the EPREL database. Like all suppliers of professional refrigeration equipment (manufacturers, importers, agents), we register our energy labeled products in the EPREL database. You'll find the self-serve glass-door professional refrigerator and display case lines manufactured by True here. »

This spring, cold gets a new label!

It's no secret that paying less for equipment can be a false economy, with higher energy and maintenance costs over the life cycle of the appliance. To help you make an informed decision, manufacturers have been required to put energy labels on some products since 2016.

The Governing body responsible for the labelling requirement. Since the UK has now exited the EU, some labels for this locality now display a Union Jack flag instead of the Flag of Europe, however the product testing procedures and requirements remain the same and can be compared like-for-like.



Scannable QR code linking to the relevant page on the EPREL database for this product, where further information can be found.

Manufacturer & Model name.

Energy Efficiency Class (EEC), where A is most efficient and G least efficient.

Energy use in Kilowatt Hours over 1 year (as measured by EN23953 at Climate Class 3).

Operating temperature range for coolers with the two temperatures stated referring to the highest temperature of the warmest m-pack (top figure) and the lowest temperature of the coldest m-pack (bottom figure) during testing

The sum of the display areas with chilled operating temperatures (in m² for most product types).

Operating temperature range for freezers with the two temperatures stated referring to highest temperature of the warmest m-pack (top figure) and the lowest temperature of the warmest m-pack (bottom figure) during testing

The sum of the display areas with frozen operating temperatures (in m² for most product types).

The EEC letter grade on the label is a quick way to determine the energy efficiency of a product as it compares to others on the market.

For a more in-depth understanding of what the product will cost your business to operate, **the kWh/annum figure from the label can be multiplied by the cost paid per kWh in order to determine a rough annual operating cost,** which then can be multiplied up by a number of years.

a bit of history

Household and professional appliances have steadily improved since energy labels were first introduced in 1995, and the least efficient models have been banned by regulation. This has led to an abundance of class A appliances, with not much left in the C or D class.

Periodically, these letter bands are re-evaluated so what was an "A" becomes a "C", and so manufacturers have new targets to aim for in producing even greater efficiencies.

The new regulations could generate energy savings of 48 TWh in 2030 (half of Belgium's annual energy consumption in 2016).

Manufacturers urged to always aim higher

Additional product reparability and recyclability criteria will gradually be added as part of the ranking process.

Surprise!

As of the introduction of the new labels, there are less class A or B products available. The energy efficiency classes have been designed to make room for innovative and more efficient products that will gradually make their way onto the market.

For more information, visit www.label2020.eu

Refrigerating appliances with a direct sales function get the label as well

In commercial refrigeration, labeling was originally only compulsory for kitchen refrigerators and freezers equipped with full doors and drawers. Now it is required for glass-door and open refrigerated and freezer cabinets.

As of March 1, 2021, all commercial glass-door and open refrigerators and freezers must meet minimum energy efficiency performance standards and, for the first time, they must carry energy labels and be listed in EPREL in order to be sold on the European market.

March 1, 2021

Labelling regulation is extended to require all glass fronted and multideck commercial refrigeration equipment to meet minimum energy performance standards and carry a label.

March 19, 2021

Distributors have finished replacing old labels with new ones in stores

December 1, 2021

Distributors can no longer sell products that have not been reassessed with the new label

What is behind the **energy label for glass door refrigerated cabinets ?**

The test takes place in a 25°C ambient environment with 60% Relative Humidity (RH), a lower temperature than the counterpart 'Professional refrigerators' test, since these types of cabinet are more likely to be located "front of house" rather than in hot kitchens.

The cabinet is loaded in a specified way with bricks made of "Tylose gel". Some of these bricks contain a temperature probe which is attached to specialist data capture equipment, recording their temperature over the course of the test. For glass door retail units, the range is typically -1°C to 5°C.

The letter grade on the label is called it's "Energy Efficiency Class" (EEC) and is determined based on the "Energy Efficiency Index" (EEI), a numeric figure obtained through the testing process.

The result of this testing which is published and visible to consumers is the energy label.

> "Our True equipment is always working, constantly maintaining great temperatures and also helping us to achieve cost savings in terms of energy use."

Guillaume Thévenet, Franchisee,
Pizza Cosy Roanne

Watch the video here

How to scan a QR code

1. Open the Camera app from the Home screen, Control Center, or Lock screen.
2. Select the rear facing camera. Hold your device so that the QR code appears in the viewfinder in the Camera app. Your device recognizes the QR code and shows a notification.
3. Tap the notification to open the link associated with the QR code.

There is a natural refrigerant, and we're already using it.

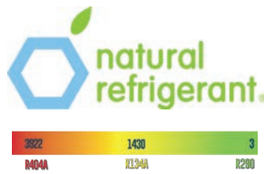
As a leader in commercial refrigeration, True is committed to replacing dangerous substances with eco-friendly alternatives. Therefore, we use an R290 hydrocarbon refrigerant in our products.

What is hydrocarbon refrigerant?

Hydrocarbon (HC) refrigerants are natural, nontoxic gasses that have no ozone depleting properties and low global warming potential. For this reason they have been selected as the environmentally friendly successor to hydrofluorocarbon (HFC) refrigerants for commercial refrigeration, after being used widely for many years in domestic refrigeration.
R290 specifically, a highly refined propane, is the primary HC refrigerant gas now used in both commercial refrigerator and freezer equipment, and presents a number of advantages:

Environmental benefits

Global Warming Potential (GWP) is the relative measure of how much heat a greenhouse gas traps in the atmosphere. R290 carries a GWP of just 3, a massive reduction compared to typical HFC gasses. It also has ZERO ozone depleting properties (ODP).



Operational benefits

R290's thermodynamic properties are also superior to HFC's, with a heat capacitance around 90% greater than R134a and 140% greater than R404A, and lower viscosity. This means that R290 can absorb more heat, faster, resulting in quicker temperature recovery, and when harnessed by the latest in energy efficient components, significantly lower energy consumption.

Two keys facts about refrigeration for retail outlets

In food retail, all refrigerated products are now often displayed behind glass instead of "open" units like they were in the past.

Placing a door on these displays massivly decreases the amound of electricity needed to keep the unit holding the required temperature.

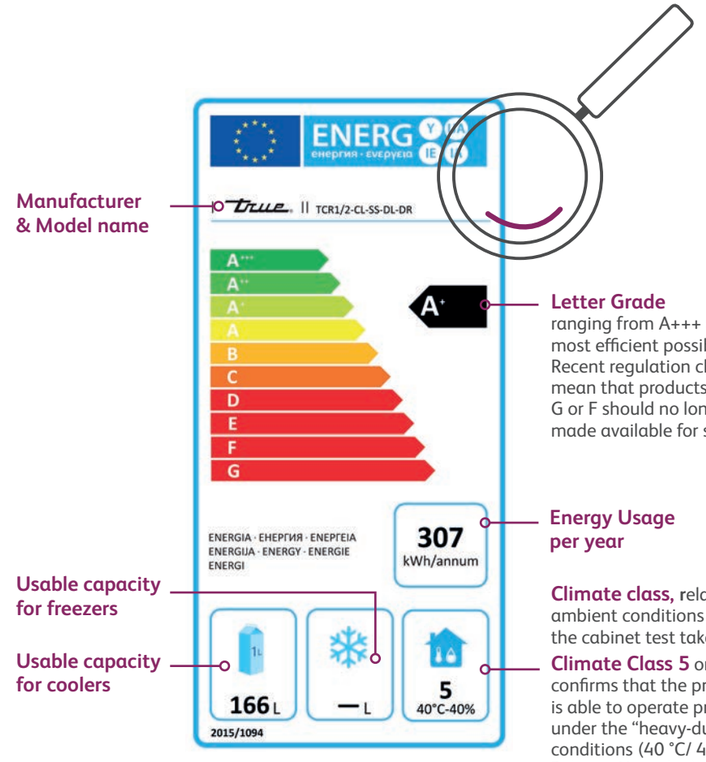
The trend for reducing energy use is supported by European legislation. As of March 1, 2021, energy rating and ecodesign labels will be mandatory on glass-door display refrigerators, cold drink vending machines, and ice cream freezers.

What about existing foodservice labels?

From March 1 2021, the Energy Labelling Regulation will be extended to also require labelling on glass door and "doorless" multideck coolers (i.e. "refrigerating appliances with a direct sales function"), but the existing labelling for 'Professional Refrigerators' does not go away.

The intension is that labels for 'Professional Refrigerators' will also be redesigned in future to be more like the "new style" A-G range labels found on glass door products. But for now, the two different styles are both active.

The 'Professional refrigerators' product category applies to various professional refrigerator and freezer solid door/drawer storage cabinets, commonly used in foodservice kitchen and hospitality settings, including upright and counter units, plus other types such as blast chillers. It has been a requirement since 2016 that these products meet minimum energy performance standards and carry labels.



Refrigeration buying checklist

Whether looking to buy your first cooler, replacing an older model, or just curious about whether you could save money and make a more positive environmental impact by upgrading to newer products, below is a quick guide to the steps you can take to help make an informed choice:

1 Decide **the type and size** of product required.

2 Look out for **energy labels on applicable products.**

3 **Compare products based on the energy they use**, but also net/usable capacity and other factors, such as the manufacturer's warranty provided.

4 **Use the energy consumption data along with the price you pay for electricity** to determine what it will cost you to run over the years. For reference, quality commercial refrigeration equipment which is properly maintained can have a 10+ year service life.

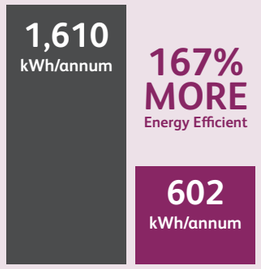
5 **Factor in this lifetime running cost**, along with the purchase price of the product and additional benefits such as longer warranty periods to determine which product represents the best value.

Estimate your carbon impact

You can compare the kWh consumption of your existing appliances with that of a new appliance by entering data in a greenhouse gas emissions calculator. The difference may be minimal from one refrigerated cabinet to the next, but for operators with a lot of equipment, choosing the right models can significantly reduce their impact.

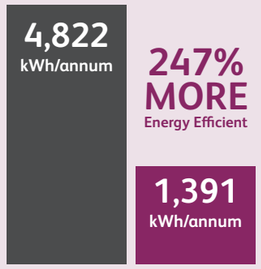
To learn more about this, check here

Glass Door Retail Cooler Example



Product	GDM-23	T-23G-HC
Purchased date	2010	2020
Refrigerant gas	**R134A**	**R290**
Regrigerant GWP	**1430**	**3**
kWh/annum	1610	602
1 year running cost*	€ 202	€ 75
10 years running cost*	€ 2,019	€ 755

Foodservice Freezer Cabinet Example



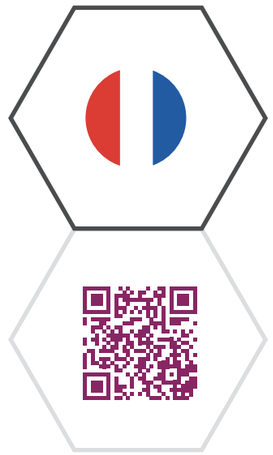
Product	T-23F	TGN-1F-1S
Purchased date	2010	2020
Refrigerant gas	**R404A**	**R290**
Regrigerant GWP	**3933**	**3**
kWh/annum	4822	1391
1 year running cost*	€ 605	€ 174
10 years running cost*	€ 6,046	€ 1,744

*Running costs based on an average cost of EUR 0.1254 per kWh.

To incentivise businesses to invest in new and more energy efficient equipment, some countries are offering tax back schemes as an additional benefit of going green

For French Operators

- **Until December 31, 2022, get a tax discount of up to 40% when you buy a professional refrigerated cabinet that uses "clean" refrigerants.**
- **Avoid the tax on F-gases introduced in 2021.**



Similar schemes are also being offered in other countries

By choosing energy efficient appliances, you can be part of the sustainable cold chain revolution.

Going green is more cost effective

When you buy equipment that uses low-GWP refrigerant gases:

1. You're saving the planet

2. You're saving money

- Some countries subsidize the design and purchase of clean equipment.

- Some countries apply taxes that make all unclean gases more expensive.

Expert True

Michael Russell,
Head of True's European Regulatory Testing facility

True is one of very few commercial refrigerator manufacturers in Europe to have their in-house testing facilities accredited with ISO/ICE 17025 certification. Why is this important to True?

ISO17025 enables True Refrigeration to demonstrate to authorities and customers that we are able to generate consistently valid results to a recognised test standard. Being accredited in this way means that we do not require third party verification for our test results for True products to be accepted on to EPREL for example, whereas other manufacturers who are not accredited need to work with third parties who are.

True Refrigeration invests a great deal in product testing. It is a valuable piece of our product development process, contributing towards to high quality reputation of our equipment.

That must mean a lot of testing for a company like True which supplies into over 100 countries globally?

Globally, professional refrigeration is now a highly regulated industry, with Governments and States mandating minimum energy and performance standards which products must meet in order to be sold.

Like many other industries, commercial refrigeration products are contributing a small part towards the larger goals and targets which many countries have around reducing carbon footprints and environmental impact. It's through schemes like the EU's Ecodesign Directive and Energy Labelling Regulation that these wholesale energy consumption reductions can be driven.

As a manufacturer, this means a constant investment in further innovation and technology development, resulting in new products brought to market offering progressively greener credentials. In our industry, True is uniquely positioned in that we are a privately owned business which also manufactures on a global scale, allowing us to make these large investments and meet these changing requirements.

From March 1, 2021, energy labels are now required on more commercial refrigeration products. What are the benefits of these labels for the consumer?

From a customer point of view, having these labels is beneficial because they provide a like-for-like basis for comparison between products from different brands. If everyone wasn't testing to the same standard (as has been the case in the past), it would be more difficult for the consumer to determine which product to invest in.

Having the energy usage of the product stated on the label hopefully helps consumers get beyond the false economy of making a purchase decision based solely on the acquisition cost. As with many other types of equipment, you do tend to find that the cheaper products often also use considerably more energy, so you would have saved money in the longer term by investing in a more energy efficient alternative.

Having a label, and (in the case of glass door products) it being linked to the EPREL, is also further peace of mind that this product has been properly evidenced to the European Commission and meets their standard. There should be no doubt that the unit will perform as advertised.

A new generation **leading the way**

3

Sustainability is a deciding factor when choosing where to eat out **for over 80%** of respondents*; **83% expect hospitality brands** to take part in sustainable practices**. This is especially true of **millennials**, who eat out more often according to studies.

*Sustainable Restaurant Association survey **CGA survey in association with UKHospitality

The **F-Gas Regulation** aims to reduce Global Warming emissions caused by F-gases (the refrigerants typically found in heating and cooling applications, including commercial refrigeration equipment), and is part of the European climate change agenda as set out in the **EU Low Carbon Roadmap.**

The mechanism ensures emission reduction through a schedule of gradual phase-down's and outright bans over an agreed time period. In effect since 2015, the eventual goal is **a reduction** in the use of HFCs (hydrofluorocarbons) **of 79% by 2030**, encouraging manufacturers, services companies and operators to adopt technologies operating on refrigerants with significantly lower Global Warming Potential.

Big changes came into effect on **January 1, 2020,** impacting operators in areas such as service and maintenance of existing refrigeration equipment, and availability of like-for-like replacements.

Regulations drive improvements to equipment

Consumers, organizations, and governments the world over are increasingly concerned about the impact human activities are having on the environment. As restaurant and distribution industry professionals, you can be part of the solution. And the first step is to choose your refrigeration equipment carefully.

F-GAS REGULATION

Fridge laws

Increasingly strict for refrigerants

The 2030 target of Europe's F-gas Regulation is clear: Refrigerant-related greenhouse gas emissions must be reduced by a factor of five.

Under F-gas, high-GWP (Global Warming Potential)* refrigerants will be phased down. The amount of HFCs made available on the market will be progressively reduced according to their GWP, which will drop from about 2,000 to 400 over 15 years.**

*GWP (Global Warming Potential): indicator of a refrigerant's radiative properties.
** HFC (hydrofluorocarbons): Halogen compound gases used to replace substances that deplete the ozone layer (CFCs), but that contribute to the greenhouse effect.

1987

Montreal Ban on CFCs (chlorofluorocarbons) and HCFCs (hydrochlorofluorocarbons), which deplete the ozone layer and contribute to the greenhouse effect. They are replaced by HFCs (hydrofluorocarbons), which have a low impact on the ozone layer.

1997

Kyoto 1997 Ban on HFCs:
They are now known to produce greenhouse gases (100 to 300 times more than CO_2)

2006

The EU adopts the **greenhouse gas regulation (F-gas).**

2015

The European F-gas II regulation speeds up the reduction of greenhouse gas emissions with an eventual ban on HFCs still on the refrigeration market.

2020

Ban on R404A
(GWP 3922)
is the most widely used gas in commercial refrigeration throughout the EU today, commonly found in low-temperature remote systems (such as those used in supermarkets) and in smaller integral freezer cabinets. Since January 1, 2020, there has been a ban on the sale of new commercial refrigeration equipment that uses high-GWP gases.

2022 **COMING SOON**

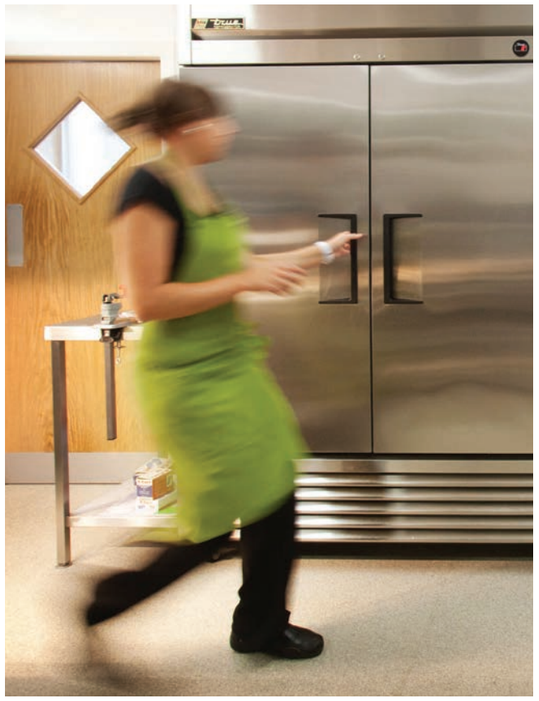
Ban on R134a
(GWP 1430)
Where R404A is the refrigerant gas typically found in larger cold systems and integral freezer units, R134a is the HFC used for commercial refrigerator/cooler equipment. The ban on this gas is coming shortly, in 2022.

2030

Ban on the use of recovered, regenerated, and/or recycled refrigerants with a GWP > 2,500 for service and maintenance (applies to freezers and refrigerators that use R404A).

What is your **HFC exit plan?**

The regulations are in the place. The phase-out deadlines are upon us. Now is the time to assess your refrigeration assets and determine the impact on your operation. Regardless of F-Gas, undertaking regular audits and keeping an up to date record of the refrigeration equipment assets in your estate is just good practice. With accurate data, you can effectively determine the point at which equipment replacement makes sense.



information to identify

1. **Manufacturer, model name, serial and asset numbers**
2. **Refrigerant gas used**
3. **Age of the equipment**
4. **Warranty coverage status**
5. **Condition of the equipment (at last PPM)**
6. **Quantity and costs of service calls to date**

To avoid the added costs and legal obligations of F-Gas, and receive the benefits of HC refrigeration technology, any existing assets operating on HFC gasses which are out of warranty, in poor condition and/or 5+ years old should be considered for replacement.

Once assets have been identified and information compiled, it is possible to compare the energy usage of equipment, old-for-new, based on product labelling published on manufacturer and distributor websites.

For existing older products, labelling (introduced 2016) may not exist, so it may be necessary to contact the manufacturer directly for information. In the case of discontinued products, it is safe to assume that a HC equivalent product available today will be at least 30% more energy efficient, but could be several hundred times more efficient. Recent technological advances have been that significant.

For operators with large estates, using the most energy efficient products available can have a huge impact on utility costs. Consider not just the acquisition cost of the equipment, but the operating costs over the lifetime of the product, which can equate to several times the capital cost of the product purchase.

Be ready today for the refrigeration of the future

Door locks
as standard.

Digital control for state of the art temperature precision.
Environmentally friendly R290 hydrocarbon refrigeration system for the best in food preservation.

natural refrigerant.

Dual tray slide system
with anti-tilt for wire shelves & 2/1 GN pan storage.

Sleek, heavy duty
metal handles.

Compressors
perform better in the coolest, most grease free area of the kitchen.

Field reversible door hinge.

True first started testing R290 HC in 2007

Since then, our Natural Refrigeration development initiative has seen the redevelopment of our entire product offering. As a result of this investment, True now produce several of the most energy efficient commercial refrigeration products currently available on the market.
We are helping operators to be more environmentally responsible, achieve targets to reduce energy consumption, save money, and supplying them with a better, more reliable refrigeration product.

WARRANTY 5 YEARS ★
PARTS, COMPRESSOR AND LABOUR

BE READY

truerefrigeration.eu

true® REFRIGERATION