



# EcoGuide

for choosing your professional refrigerator



**Electrolux**



# Why an Ecoguide?

The choices we make each day are the ones that build the future of our planet and improve our work.

The tree on the cover is the Green Spirit, the symbol for a more sustainable future. Electrolux believes in the social responsibility and in the ethic based on the principles of transparency and awareness. Electrolux manufactures its products thinking of the generations to come.

In line with this spirit, the Ecoguide was born to help you through how to choose, use and maintain professional refrigerators.

Respect for the environment is also the best way to ensure your business more efficient.

# Responsible refrigeration

Professional refrigerators preserve a core asset: food.

At the same time, its operation accounts for approximately 40 percent of consumption (see chart) of a professional kitchen.

They are on day and night and require a lot of energy. So, the importance of assessing the qualities of a good professional refrigerator to rationalize consumption and improve the efficiency of its operation.

Choose refrigerators that ensure maximum reliability - while maintaining a constant and uniform temperature - and minimize energy use and environmental impact.



Professional refrigerators are the only appliances that run 24 hours a day, 365 days a year. With the new generation you can save up to 830 €/year (freezer) and 300 €/year (refrigerator) in class A comparing an equivalent cabinet in class G\*



\* see note at page 4.

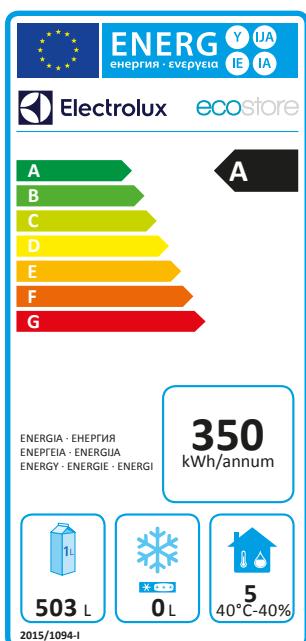
Incidence of consumption in professional kitchens



- **40%** Refrigeration
- **37%** Cooking
- **12%** Ventilation
- **6%** Water heating
- **5%** Other

# Energy saving

The latest Electrolux green achievement obtained is the Commission Regulation (EU) 2015/1095 of 5 May 2015 implementing Directive 2009/125/EC of the European Parliament and of the Council.



For the first time ever in the professional world there is an European energy classification in class for any refrigerated cabinets. An easy readable label to evaluate the cabinets consumptions based on the energy efficiency.



\* potential savings based on European Ecodesign directive data and obtained by comparing Class G refrigerators and freezers with equivalent Class A cabinets (energy cost of 0,21 €/kWh and net volume of 503lt).

The label complies with the delegated regulation (UE) 2015/1094 of the commission of 5<sup>th</sup> may 2015

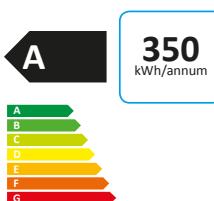
## Energy efficiency class



## Energy cost (€/year)\*

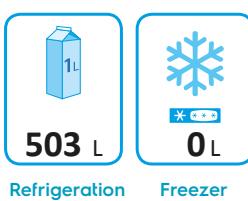
	A	B	C	D	E	F	G	Savings between class G and A (€/year)*
<b>Freezer cabinet</b>	124	207	290	415	622	705	954	<b>830</b>
<b>Refrigerated cabinet</b>	45	75	106	151	226	256	347	<b>300</b>

Be sure to choose  
**the best solution**



## Energy class and yearly consumption.

It shows you how much electricity the product uses during the year, helping you to budget for your energy bills.



## The highest volume.

The **NET volume** allows you to better choose the number and type of appliances to purchase.

The **data on the label** is now calculated according to a standard methodology and it provides the real usable space for food storage.



## The safest working conditions

The label indicates the capability of the product to correctly preserve food in different working conditions.

The label will display:

- ▶ **5:** "heavy duty": performs at **40°C** ambient temperature and **40%** humidity
- ▶ **4:** "normal duty": performs at **30°C** ambient temperature and **55%** humidity
- ▶ **3:** "light duty": performs at **25°C** ambient temperature and **60%** humidity

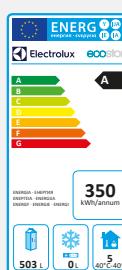
Home products are not  
for professional kitchens!

Notice the difference: when the label shows the **sound level** of the equipment and not the **climate class**, it is referring to a home appliance test.

The use of refrigerated equipment in a professional workplace is much more stressful than the use in the home environment.

Home products used in a professional environment are dangerous because their preservation performances do not guarantee the Food Safety!

### Similar labels but different test conditions



**Professional equipment**  
Full loaded refrigerator  
Door opens 72 times for 7"  
Ambient temperature 40 °C



## Home equipment

Empty refrigerator \*

Door closed  
Ambient temperature 25 °C  
\*except freezers

# Choose the best solution

The Electrolux Professional products follow the strictest international standards for protecting the environment and managing costs.

Commission Regulation (EU) 2015/1095 of 5 May 2015 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers (Text with EEA relevance)

[www.eur-lex.europa.eu](http://www.eur-lex.europa.eu)



**THE NETHERLANDS**  
EIA (Energy  
Investment  
Allowance)

This tax relief program provides direct financial incentives to Dutch companies that invest in energy-saving and sustainable equipment.

[www.agentschapnl.nl/eia](http://www.agentschapnl.nl/eia)



Authorised User No. 000079

**GREAT BRITAIN ECA  
(Enhanced  
Capital Allowance)**

Certification is bestowed to the most efficient products in terms of energy savings. These products are checked and included in the ETL (Energy Technology List), which certifies their high energy efficiency. The products listed in the ETL offer significant long-term financial benefits and reduced CO<sub>2</sub> emissions.

[www.eca.gov.uk](http://www.eca.gov.uk)



**DENMARK**  
Go'Energi mærk  
(The Danish Energy  
Saving Label)

Go'Energi, an independent, public organisation under the Danish Ministry of Climate and Energy, creating energy efficiency in Denmark. For a full list of recommended products, see

[www.savingtrust.dk](http://www.savingtrust.dk)



Choosing a certified professional refrigerator  
is a guarantee

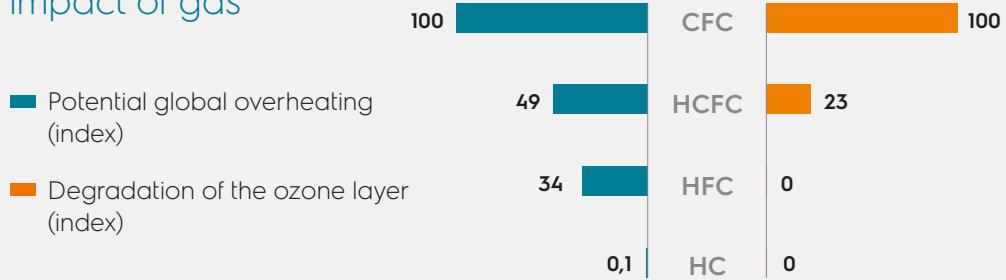


# Natural gases are a responsible alternative

The cooling unit and foams that insulate the walls of the refrigerator contain gas. Until the Kyoto and Montreal Protocol, chlorofluorocarbons (CFCs) were employed, as well as hydrochlorofluorocarbons (HCFCs), responsible for the degradation of the ozone layer. After CFCs and HCFCs, hydrofluorocarbons (HFC) were used, which reduce to zero the degradation of the ozone layer. The latest generation of professional refrigerators uses natural gases such as cyclopentane and propane (hydrocarbons - HC) which do not attack the ozone layer and do not produce the greenhouse effect.

Hydrocarbons (HC) reduce the environmental impact and produce a less aggressive effect on the components of the refrigerator. The results are a longer life of the compressor, lower maintenance costs and cost savings

## Environmental impact of gas



# Good insulation reduces power consumption

The insulation system is essential to limit consumption and ensure high performance.

Only with some materials, such as cyclopentane, the internal temperature remains consistent, because it reduces heat loss and, consequently, the activity of the compressor. It increases the insulation efficiency and keeps foam insulating characteristic longer than traditional gases. Traditional insulation becomes 18% less efficient after 2 months\*.

This has three very positive effects: reduced electricity consumption, less wear and tear of the compressor, and ease of disposal for the use of cyclopentane, as it is a natural gas. Choosing a refrigerator with "tropical conditions", i.e. able to keep the internal temperature stable, even if it reaches 43° on the outside, is synonymous with greater efficiency and reliability.

**// The insulation system is essential to limit the energy consumption //**



Recommended film thickness of the structure of the cell: minimum 75 mm.



Removable door seal for easy cleaning and for maintaining the insulating properties.



Composition of the three rooms seal to minimize energy loss.

\* Estimates of Electrolux Professional.

# More capacity, more convenience

When choosing a refrigerator, you should consider carefully the (net) professional capacity of food storage which is equivalent to the volume between the base of the grid at the bottom and the line that marks the max load at the top.



Commission Regulation (EU) 2015/1095 of 5 May 2015 implementing Directive 2009/125/EC of the European Parliament and of the Council

The ideal device is one that allows the same size to have more space, ensuring a more rational use. Another factor not to overlook is the location of the refrigeration unit which must be placed over the cell not to occupy the area reserved for food.



Choose same size refrigerators that provide more space for the food



# Each food item in its place

To preserve food better and longer, it should be positioned inside refrigerators. First, do not cross the different type of food that could cause infections and possible alterations in food. For each type of food (fish, vegetables, poultry, red meat) there is a specific refrigerator.

Storing food in closed containers to prevent mixing of odors, makes the cleaning easier and facilitates an orderly arrangement. It is also advisable to remove the food from the original containers - which transfer a strong bacterial load - as well as to rotate the food using the FIFO method (First In First Out - the first food items that get in must be the first to come out), so as to maximize the storage time of the food within the refrigerator.



Rotate the food using the First In First Out method



## The ideal climate

The Optiflow system\* is the intelligent air circulation system that promotes a uniform temperature distribution within the cell in any loading condition. An invaluable aid for proper food storage and for keeping power consumption at a minimum.



Choosing devices with systems that allow for proper air flow in the whole cell ensures an even distribution of temperature and humidity



\* Air circulation system of the new ecostore refrigerators by Electrolux Professional.

# Where to put the refrigerator

Refrigerators should be placed away from heat sources (ovens, cookers, stoves, chimneys, as well as windows and walls exposed to the sun) because otherwise they have to work harder to maintain a consistent internal temperature by consuming more energy.

It is also important to keep a minimum distance among the wall, the roof and the rear to allow a better air circulation.



Relying on the advice of professional technicians and place your refrigerator away from walls and heat sources



# How to prevent problems

Refrigerators, as mentioned, run 24 hours a day, 365 days a year. You can prevent the risk of malfunction and expensive waste of energy through constant maintenance. Here are some operations which should be performed periodically.

## Control of seals

The door seals of the refrigerator and freezer compartments ensure proper closure and prevent leakages.

The cleaning and checking for wear, at least once a month, contribute to the limitation of energy consumption.



Seals in good condition prevent harmful and costly leakages. We recommend that you clean them once a month

## Cleaning the condenser

The capacitor must be kept free from dust that may obstruct the operation. It should be noted that some of the latest generation refrigerators mount devices that prevent the accumulation of dust\*.

## Evaporator defrost

The layer of ice, caused by moisture and steam of the food, hinders the proper functioning and increases fuel consumption.

Removing the frost is easier if the fridge is equipped with an automatic defrosting system.

The new generation of refrigerators defrost when necessary only, so they reduce energy costs\*\*.

## Regular maintenance helps you save

To ensure maximum efficiency of the refrigerator, and therefore maximum savings on consumption (see table), and for unforeseen expenses, it is better to rely on a periodic maintenance service.

The frequency depends on where the refrigerator is located. It is important to make use of technical assistance centers authorized by the manufacturer and ask for original spare parts only. In environments such as bakeries, confectioneries and pizzerias (for the presence of flour) or in fast food restaurants, delis and food stalls (where the air is saturated with fat) it is necessary to repeat this operation more often. We recommend servicing professional refrigerators every 4-6 months.

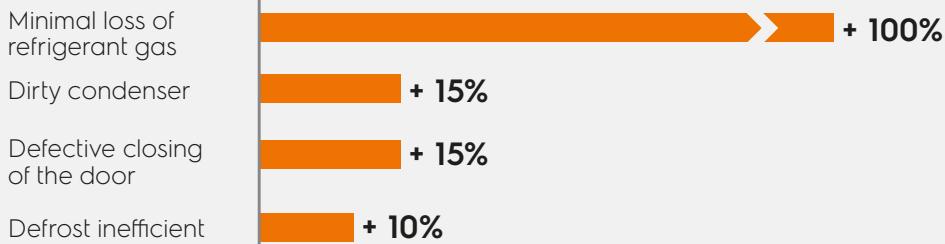


Regular maintenance allows you to save



\* Device of the new ecostore refrigerators by Electrolux Professional. It does not need any cleaning operation of the condenser. \*\* Device of the new ecostore refrigerators by Electrolux Professional.

## Relationship between technical problems and increase in consumption



# ecostore

## the highest recommendations



**HORECA 24**  
Innovation of the  
year award

November 2012, Gold medal to Electrolux ecostore as best innovation of the year in energy efficiency. "HORECA 24 Innovation of the year" award has been created to reward the most innovative products, companies, entrepreneurs and trends within the hospitality industry.

[www.horeca24premioinnovazione.it](http://www.horeca24premioinnovazione.it)



**Environmentally  
Friendly Innovation  
Award 2012**

December 2012, ecostore received an honorable mention from the jury of the "Environmentally Friendly Innovation Award 2012" promoted by Legambiente (League for the Environment) in Italy.  
[www.premioinnovazione.legambiente.org](http://www.premioinnovazione.legambiente.org)



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Share more of our thinking at  
[www.electrolux.com/professional](http://www.electrolux.com/professional)

## **Excellence** with the environment in mind

All our factories are ISO 14001-certified

- ▶ All our solutions are designed for low consumption of water, energy, detergents and harmful emissions
- ▶ In recent years over 70% of our product features have been updated with the environmental needs of our customers in mind
- ▶ Our technology is ROHS and REACH compliant and over 95% recyclable
- ▶ Our products are 100% quality tested by experts

