

## BUSINESS PLAN

### CEN/TC 44

## COMMERCIAL AND PROFESSIONAL REFRIGERATING APPLIANCES AND SYSTEMS, PERFORMANCE AND ENERGY CONSUMPTION

### EXECUTIVE SUMMARY

#### **Business environment**

CEN/TC 44 activity deals with standardization of Appliances and Systems for Commercial and Professional Refrigeration such as:

- refrigerated & frozen food display cabinets with or without incorporate condensing unit;
- refrigerators & frozen food storage cabinets, Walk In Cold Room, ice maker and ice cream machines;
- refrigeration systems composed of remote elements with respect to:
  - performance requirements and related test methods;
  - requirements and test methods for determination of energy consumption

For these products Europe represents near 40% of the world market. Commercial refrigerated cabinets and professional refrigeration products are used in retail, catering, professional kitchens, groceries and butcheries, restaurants, hotels, pubs, cafés, ...etc and following parties are involved:

- Industry
- Retailers Associations
- Caterers Associations
- Users Associations
- Public Authorities
- Consumer Association
- Non Governmental Organizations (NGOs)

Recent business, technological, environmental and social trends are addressing the issue of Ecology and the Efficient use of Energy. Quite important is in any case the need to define standards to assess and to improve product quality with respect of typical characteristics of each product (ie: temperature control, robustness).

#### **Benefits**

Within the Scope of CEN/TC 44, since 1993, 7 standards were adopted, taking into account consumer confidence in respect of performance and energy consumption.

Benefits of CEN/TC 44 activity on commercial and professional refrigerated products are addressed to:

- management layer of organizations and companies making a contribution to standardization
- standards developers and standards developing organizations
- regulators
- users of standards
- consumers
- consumers boards and consumers associations
- interested public

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As far as the energy consumption is concerned, standards intend to comply with Ecodesign of Energy Related Products Directive (2009/125/EC) and with Directive 2010/30/EU of the European Parliament and of the Council on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products.

### **Priorities**

Priorities of CEN/TC 44 activity are to make European standards available related to:

- refrigerated display cabinets – Vocabulary;
- refrigerated display cabinets – Classification, requirements and test conditions;
- walk-in cold rooms – Definition, thermal insulation and test methods: prefabricated cold rooms kit;
- walk-in cold rooms – Definition, thermal insulation and test methods: customized cold rooms kit;
- commercial service refrigerated cabinets and counters: definition of performance characteristics and energy consumption;
- blast chillers and freezers cabinets for professional use: classification, requirements and test conditions;
- soft ice cream machines – Performance and evaluation of energy consumption;
- artisan gelato and ice cream machinery – Performance characteristics and energy consumption;
- refrigerated display scooping cabinets for gelato – Classification, requirements and test conditions;
- small ice cream freezers - Classification, requirements and test conditions;
- beverage coolers - Classification, requirements and test conditions.
- amend and revise the published standards within the scope of CEN/TC 44.

## 1 BUSINESS ENVIRONMENT OF THE CEN/TC

### 1.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal, societal and/or international dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this CEN/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

#### 1.1.1 Commercial refrigerated cabinets

Commercial refrigerated cabinets are used to store **and** to display and sell foodstuff.

Commercial refrigerated cabinets **are found in areas accessible to the public** in food retail outlets such as supermarkets, groceries and butcheries, restaurants, hotels, pubs, cafés, industrial facilities and professional kitchens (e.g. in schools, hospitals, canteens).

#### 1.1.2 Professional refrigeration products

Professional refrigeration products are distinguished from commercial refrigeration products and include professional refrigerated cabinets and counters, blast cabinets, ice cream machines, walk-in cold rooms.

Professional refrigeration appliances are used to store **but not to** display and sell foodstuff and are intended exclusively for professional use.

Professional refrigeration products **are found in areas not accessible to the public** in food retail outlets such as supermarkets, groceries and butcheries, restaurants, hotels, pubs, cafés, industrial facilities and professional kitchens (e.g. in schools, hospitals, canteens).

Professional refrigeration products are primarily used for compliance with hygiene rules related to food safety (HACCP).

#### 1.1.3 Characteristics of Commercial and Professional refrigeration products

The main essential characteristics of both commercial refrigerated cabinets and professional refrigerated products are as follows:

- classification: according to temperatures and in particular by the combination of climate class and M-package temperature class;
- material, design and manufacture: the cabinet shall be constructed with adequate strength and rigidity for normal conditions of handling, transport and use; materials shall be durable and shall not favour the development of mould or emit odours;
- required characteristics: volumes and areas, thermal insulation, physical dimensions, energy consumption;
- operational characteristics, in particular as far loading criteria and number/frequency of doors opening are concerned

### 1.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of CEN /TC 44:

## **Commercial refrigerated cabinets**

### Market sector: mainly commercial

- 354.000 appliances in 2010 were manufactured in Europe In particular, the production can be subdivided into 184.000 of remote refrigerated cabinets and 170.000 of integrated cabinets pug-in type
- the estimated Stock in Eu25 for 2010 is 2,4 millions of remote units and 1,4 millions of plug-in units
- about 10 -20 manufacturers are present in Europe
- the average price for each appliance is about €2.000 for plug-in and €3.750 for remote

## **Professional refrigeration products**

### Market sector : mainly professional

The professional refrigeration products under consideration have an aggregated energy consumption of 32 TWh per year in the EU, with 659.388 units sold and a total stock of more than 6 million units

These figures split as follows:

<b>Product</b>	<b>Operating temperature</b>	<b>2008 energy consumption (TWh)</b>	<b>2008 sales (units)</b>	<b>2008 stock (units)</b>
<b>Service cabinets</b>	positive	4,6	278.211	2.282.114
	negative	4,9	119.233	978.049
<b>Blast cabinets</b>		4,0	173.655	1.331.197
<b>Walk-in Cold Rooms</b>		18,5	88.289	1.521.659
<b>Ice cream machines</b>	Positive	1.000 kW h per year per machine	27500	300.000
	negative			
<b>Totals</b>		<b>32,0</b>	<b>659.388</b>	<b>6.113.019</b>

## **2 BENEFITS EXPECTED FROM THE WORK OF THE CEN/TC**

The following benefits are expected by the main stakeholders from the work of CEN/TC 44:

### **Industries**

To have harmonized standards overcoming national product requirements; to have standards providing a common basis to evaluate different products.

### **Consumers**

To be able to rely on products verified and testing according to a commonly agreed harmonised standard.

### **Consumer board and consumer associations**

To have standards for comparative testing

### **Manufacturers**

To be able to design commercial refrigerated cabinets and professional refrigeration products complying with Ecodesign of Energy Related Products Directive (2009/125/EC).

### **Authorities**

To make reference to commonly agreed and harmonised standards for the evaluation of performances, energy efficiency and ecodesign criteria detailed by European Legislation.

## **3 PARTICIPATION IN THE CEN/TC**

All the CEN national members are entitled to nominate delegates to CEN Technical Committees and experts to Working Groups, ensuring a balance of all interested parties. Participation as observers of recognized European or international organizations is also possible under certain conditions. To participate in the activities of this CEN/TC, please contact the national standards organization in your country.

## **4 OBJECTIVES OF THE CEN/TC AND STRATEGIES FOR THEIR ACHIEVEMENT**

### **4.1 Defined objectives of the CEN/TC**

The main objective of CEN/TC 44 is to produce standards to specify the performance characteristics and related tests to control them, applied to commercial refrigerated cabinets and professional refrigeration products falling in the Scope of the TC.

### **4.2 Identified strategies to achieve the CEN/TC.s defined objectives.**

In order to achieve the defined objectives of CEN/TC 44, the following strategies have been applied:

#### **Political factors**

EU Directives and European energy saving plans, energy labelling Directives and minimum energy limit Directives.

#### **Economical factors**

Energy saving, material saving and development of new and more efficient products.

#### **Technical factors**

Design of refrigeration products providing the energy saving and guarantee the proper food preservation.

### **4.3 Environmental aspects**

The Ecodesign Directive (2009/125/EC) is an integral part of European product policy addressing the important issue of sustainable environmental and economic development targeting climate changes and resources depletion. In 2009 the Directive, which initially focused on Energy-using-Products (EuP), such as TVs, ovens or heating equipment, has been extended to Energy-related-Product (ErP) such as windows, taps and insulation materials. List of preparatory studies that have been launched by the European Commission between 2006 and 2009, either for DG Transport and Energy (TREN) or DG Enterprise and Industry (ENTR).

Within this list EU Commission issued standardization mandate (M/495 EN dated 27<sup>th</sup> of July 2011) to CEN/TC 44 for the following items:

- TREN 12 - Commercial Refrigeration (display cabinet and cold vending machines)

- ENTR 1 - Professional Refrigeration (service cabinets, blast cabinets, walk in cold rooms, chillers, remote condensing units)

## **5 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE CEN/TC WORK PROGRAMME**

Professional users often perceive these refrigeration equipments as a necessary investment due to hygiene constraints, but with no great added value for their "core business" (i.e.cooking). Besides, professional refrigeration is used mainly for storage, not for selling foodstuff (contrary to 'commercial' refrigeration). Therefore, consumers tend to focus on purchase price only and to overlook products with better performance and energy using behaviours that make possible (money and energy) savings over the life cycle. This 'myopic behaviour' can be considered as a market failure. In this context, it is necessary to widen the awareness on the need to prepare standards suitable to answer to the requirements of the forthcoming Implementing Measures on Ecodesign criteria of professional refrigeration products.

The risks are:

- Overlap with other Regulations and Directives (F-gas Regulation 842/2006; Energy Performance of Buildings Directive 2002/91/EC).
- Sustainability of methods proposed into standards: the use of measurement methods drags resources and expenses in the implementation of the standards, so CEN experts should focus also on total cost of implementing standards in order to maximize the benefits without heavy impact on key business users (consumer, industry, Member State ...).