

**June 1997**

**STANDARDISATION**  
**of**  
**REFRIGERATED DISPLAY CABINETS**  
**EUROVENT/CECOMAF RECOMMENDATION**  
**for**  
**STANDARD TEST REPORT**

The purpose of this Recommendation, prepared by the EUROVENT / CECOMAF WG14 "Refrigerated Display Cabinets" is to help the users of the new European standard EN 441 by specifying a common presentation of test data and other information concerning this equipment.

**EUROVENT/CECOMAF**  
**EUROPEAN COMMITTEE OF**  
**AIR HANDLING, AIR CONDITIONING AND REFRIGERATION**  
**EQUIPMENT MANUFACTURERS**

In order to give at the Commercial Refrigeration field a common tool to specify, test and present information regarding refrigerated display cabinets, the CEN/TC44 has been preparing a new European Standard EN 441.

The general lay-out of this standard is as follows :

- |  |                        |
|--|------------------------|
| - Part 1 : Terms and definitions   | EN 441-1 : 1994        |
|  | and EN 441-1/A1 : 1995 |
| - Part 2 : General mechanical and physical requirements  | EN 441-2 : 1994        |
| - Part 13 : Air temperature measurement  | pr EN 441-13 : 1997    |
| - Part 4 : General test conditions   | EN 441-4 : 1994        |
| - Part 3 : Linear dimensions, areas and volumes  | EN 441-3 : 1994        |
| - Part 5 : Temperature test  | EN 441-5 : 1996        |
| - Part 6 : Classification according to temperatures  | EN 441-6 : 1994        |
| - Part 7 : Defrosting test   | EN 441-7 : 1994        |
| - Part 8 : Water vapour condensation test  | EN 441-8 : 1994        |
| - Part 9 : Electrical energy consumption test  | EN 441-9 : 1994        |
| - Part 10 : Test for the absence of odour and taste  | EN 441-10: 1994        |
| - Part 12 : Measurement of the heat extraction rate of the cabinets<br>when the condensing unit is remote from the cabinet | EN 441-12 : 1997       |
| - Part 11 : Installation, maintenance and user's guide   | EN 441-11 : 1994       |

The first twelve parts of EN 441 are already available and a thirteenth part is submitted for CEN inquiry.

Due to complexity of the standard and a large number of different tests, it appeared necessary to specify how to use these standards in a common way.

**EUROVENT/CECOMAF WG14 recommends to the EN 441 users to establish the test reports according to the model presented in this document.**

**A particular attention is drawn to the following facts :**

- \* **a measurement of the heat extraction rate according to EN 441-12, and an electrical energy consumption test according to EN 441-9 are not utilizable without temperature test results according to EN 441-5 ;**
- \* **information regarding electrical energy consumption of the condensing unit used during a remote cabinet test must not be written in an official test report.**



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