



LABORATORY TEST FOR ENERGY SAVINGS

On refrigerated Dairy Cases

Report n°: E 00031 B
Order n°: 947 048
Contractor: **ECONOFROST**
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Subject matter of the test: **COVERS FOR REFRIGERATED DAIRY CASES**
Type: **ECONOFROST**

Scope of the test: Measurement of the power consumption with and without cover, to prove the possible energy savings.

TEST SET-UP

By means of a kilowatt-hour meter, to determine power consumption of a commercial refrigerated case with 5 compartments and of the following interior dimensions: height 1.200 mm., width 1.800 mm. It was measured with the Econofrost-cover in open and closed position. With the cover in closed position, a free air gap of 20 mm. was left on top and laterally between the cover and rack casing. Each compartment of the rack was always half filled with closed 1-litre glass containers of water. By means of a 6-colour recorder and resistance thermometer, the temperature values were recorded at the following points:

| | |
|--------------------------|-------------------------------------|
| Measuring point 1 violet | water top shelf |
| Measuring point 2 red | water intermediate shelf |
| Measuring point 3 black | water low shelf |
| Measuring point 4 green | air intermediate shelf |
| Measuring point 5 blue | air exhaust air lattice in the case |
| Measuring point 6 brown | room temperature |

Measuring strips indicating the reading scale are attached.

TEST DATA

| | |
|--|----------------------------|
| Room temperature: | 21°C ± 1°C (69.8° F ± 1.8) |
| Relative humidity: | 50 - 60% |
| Supply voltage: | 220 V. a.c. ± 1% |
| Rated power consumption of the cooling rack: | 1.100 W. |
| Test duration: | 2x10 days |

POWER CONSUMPTION

| | |
|---|--------------|
| With the cover in open position in 240 hours: | 168,17 Kw/h. |
| Average power consumption: | 0,70 Kw/h. |
| With the cover in closed position in 240 hours: | 105,93 Kw/h. |
| Average power consumption: | 0,44 Kw/h. |

ENERGY SAVINGS

0,7 Kw/h - 0,44 Kw/h = 0,259 kw/h = 37%

TEST RESULT

On the basis of the test set-up as described above, the application of the Econofrost cover resulted in energy savings of 0,259 Kw/h per hour. Compared to a power consumption of 0,7 Kw/h per hour with the Refrigerated Case in open condition this result corresponds to energy savings of 37% per operating hour.

There was no water condensation during the complete length of the test.