

# EC706

## Cooling load

Release 5

EC706 works only in conjunction with the EC700 base module for evaluating the energy performance of buildings (both winter and summer) in accordance with the four UNI/TS 11300 Technical Specifications.

By completing some additional data compared to EC700, it is possible to calculate the **summer peak power** according to two alternative methods: the **Carrier method** or the **hourly dynamic method** according to EN ISO 52016.

The calculation is performed for every hour of the day in the case of hourly dynamic method, or from 8 a.m. to 6 p.m. in the case of Carrier Method; the evaluation can be performed for all months of the year in the case of hourly dynamic method, or for the peak month (or for every month from May) in the case of the Carrier Method.

Various contributions are calculated: for solar radiation, for heat transmission, for people, electrical loads and other internal loads.

The screenshot shows the EC706 software interface with the 'Cooling load' calculation results. The main workspace displays a table with columns for 'Zone', 'Description', 'Time', 'On (h)', 'On (h)'. The table is divided into two sections: 'Loads in the peak hour of the zone' and 'Loads in the peak hour of each room'. The 'Zone' section shows a total of 1889, 1843, 2480, 2654, 1911, 2221, 902. The 'Room' section shows a total of 1889, 1843, 2480, 2654, 1911, 2221, 902.

## Results

The results mask offers the possibility of consulting the following calculation details:

- loads from solar radiation through all window components introduced into the various rooms of the project;
- thermal transmission loads through all opaque and windowed components introduced into the various rooms of the project.

The results can be calculated for the various months and for the various time slots, in the context of individual methods. The following data are also reported:

- thermal load for ventilation (divided into "latent" and "sensitive"), internal loads related to persons (divided into "latent" and "sensitive"), electrical and other loads;
- for each thermal zone, the global results for the various thermal loads mentioned above are indicated, evaluated in the hour of maximum load of the zone or room.

With regard to ventilation heat loads, it is also possible to take into account an effect of a **recuperator**.

The screenshot shows the EC706 software interface with the 'Solar radiation loads through glazed elements' calculation details. The main workspace displays a table with columns for 'Code', 'Type', 'Description', 'Surf', 'Ht. Surf. (m)', 'U (W/m²K)', 'Color', 'U (W/m²K)', 'H.L. (h)', 'G (h)'. The table is divided into two sections: 'Solar radiation loads through glazed elements' and 'Transmission loads through opaque or glazed elements'. The 'Solar radiation loads' section shows a total of 1889, 1843, 2480, 2654, 1911, 2221, 902. The 'Transmission loads' section shows a total of 1889, 1843, 2480, 2654, 1911, 2221, 902.

## Prints

Printouts of the calculation results are all available in .RTF format, so the user can make addition and/or customisations to the documents before proceeding to the final printout.

## Archives

The program is enhanced by comprehensive support archives, which are constantly updated and can also be updated by the user:

- **climate data** archive of 8000 municipalities in Italy;
- **building materials** archive, containing more than 1000 codes;
- archive of pre-calculated **structures**, filled with around 300 structures of various type.