EC709

Thermal bridges

Release 2

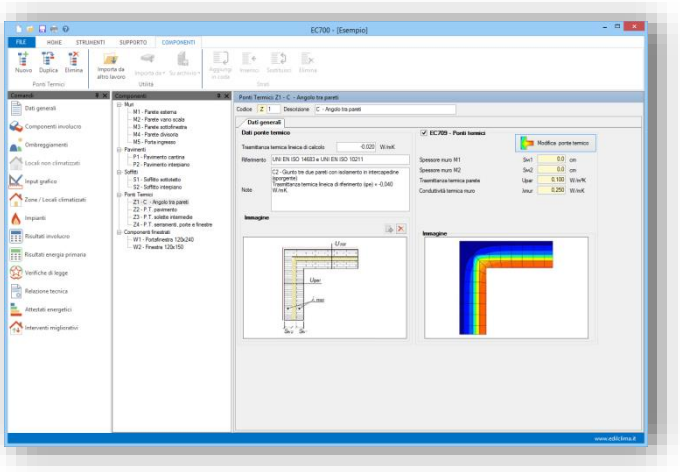
EC709 calculates the linear thermal transmittance of thermal bridges as a function of selected design parameters according to the procedures defined in the standards **EN ISO 10211** and **EN ISO 14683**.

EC709 can be used either stand-alone or as an additional module fully integrated within EC700 Energy performance calculation software.

As a stand-alone application, EC709 calculates the linear transmittance both according to internal dimensions (Ψ_i) and according to external dimensions (Ψ_e).

If it is integrated into EC700, only the thermal transmittance according to external dimensions will be calculated (Ψ_e), coherently with EC700 description of the building.

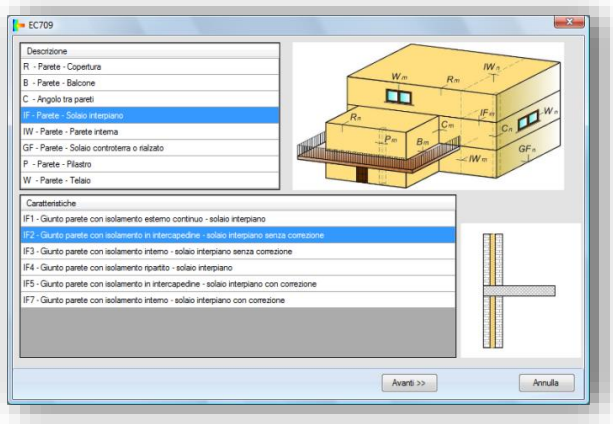
In all cases EC709 checks the critical surface temperature to avoid surface condensation on the thermal bridge.



Features

EC709 software calculates the **linear transmittance** of almost 200 types **of thermal bridges** according to the actual value of relevant properties and dimensions. EC709 provides an interpolation between values calculated according to the detailed method specified in EN ISO 10211.

For each linear thermal bridge, EC709 displays a representative picture of the thermal bridge type with qualitative heat flux lines and isothermal lines. The linear thermal transmittance is calculated according to relevant parameters specified by the user.



The representative graphical display of the thermal bridge helps the designer in quickly finding the critical areas with most heat loss and risk for low surface temperature.

EC709 covers the following types of thermal bridges:

- junctions between external envelope building elements (between roof and walls, between wall and balconies, angle between walls);
- junctions between external walls and intermediate floors or internal partition walls;
- junctions between external walls and floors, either suspended or at ground level;
- pillars within external walls;
- junctions between walls and windows or doors

EC 709 supports the **critical surface temperature check**, to avoid **surface condensation** on the thermal bridge. This check can be performed varying both internal and external boundary conditions.

Printed output

All calculation reports are available as .**RTF files**. The user can complete and customize the report before final printing.

EDILCLIMA®