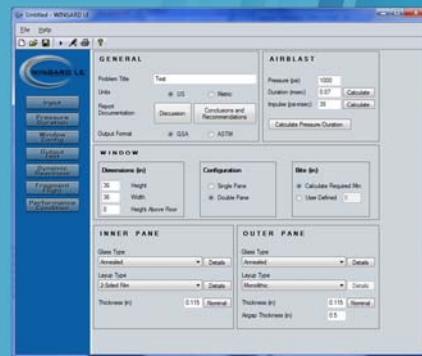
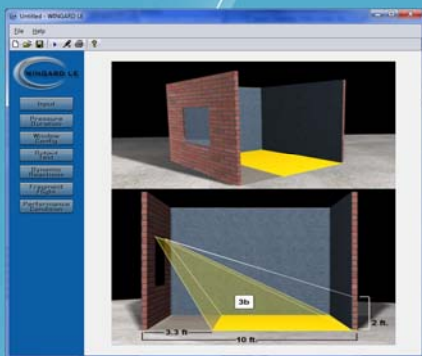




Window Glazing Analysis Response and Design (WINGARD) provides a simple but accurate analytical model of window response to the effects of an explosion. The program accepts user input of window system properties and explosion characteristics to calculate the performance of the window system when subjected to the defined blast loads. Two versions of WINGARD are available for punched window analysis: WINGARD LE and WINGARD PE.

WINGARD LE is ideal for architects, planners and security personnel who need a quick, preliminary solution for common glazing systems loaded with basic blast loads. WINGARD LE's input and output is limited to the minimum required to analyze a typical single-pane or insulated glazing unit (IGU) punched window with laminated glass or a security window film.



Specific features of WINGARD LE include the ability to:

- Quickly model a variety of glazing systems and predict glass fragment hazard
- Calculate and display time-history plots of loading, displacement, velocity, acceleration, and reactions
- Quickly switch between English and Metric units
- Interact with graphs (zoom, scale)
- Copy and/or print all output
- Save graphs in DPLLOT
- Create a report

Results match WINGARD PE for windows that can be modeled in WINGARD LE.



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