

WL – Wind Loads

The english version of the WL manual still needs to be translated and will be available in a later Release. Until then please have a look on the [german version](#).

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Basic Documentation – Overview

In addition to the individual program manuals, you will find basic explanations on the operation of the programs on our homepage www.friilo.com in the Campus-download-section.

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Application options

The WL program is suitable to determine the distribution of horizontal forces acting on a building. The distribution takes place in accordance with the stiffness of the bracing components.

Available standards

Horizontal loads from wind can be generated automatically for the following standards:

- DIN EN 1991
- ÖNORM EN 1991
- BS EN 1991
- DIN 1055

Data entry

- Data can be entered both graphically and in tabular form.
- Bracing components can be wall piers or columns. Wall piers consist of any number of straight wall sections connected to each other. Columns can have a rectangular or circular cross-section (solid or hollow).
- A type of material can be assigned to each column and each part of the wall. Materials can either be selected from a catalogue for concrete or masonry or freely specified by the user.

Loads

- Vertical loads can be entered for columns and piers. The self-weight is determined automatically. The vertical loads on a pier can consist of several components.
- From the entered load cases, pre-defined superpositions can be generated.

Calculation and output

- From the vertical loads of the superposition, an inclination can be generated in accordance with
 - DIN 1045 7/88 eq. 5
 - DIN 1045-1 eq. 4 and eq. 5
 - EN 1992-1-1 eq. 5.1 and eq. 5.4
- For wall piers, stresses can be determined with or without exclusion of tensile stresses.
- In addition to the output of a load case, there is the possibility to put out the extreme stresses of all superpositions.
- To assess whether a second-order analysis is necessary, the stiffening criterion is verified in accordance with the following standards:
 - DIN 1045/1045-1
 - DIN EN 1992
 - ÖNORM EN 1992
 - BS EN 1992
 - NTC EN 1992
 - PN EN 1992
 - EN 1992-1-1

Import GEO / -isb cad-

The vertical loads on piers and columns of the floor load cases G and P calculated with the Frilo Building Model program can be transferred to the Wind Load program via the ASCII interface. A load case G is generated from the floor load cases G, the floor load cases P are combined to one load case P. In addition, buildings entered with the Frilo Building Model (GEO) can be imported.

Floor plans can be imported as DXF background image or directly from GLASER -isb cad-.