NextFEM

Designer
ImportExport module manual

Version 1.5c

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Index

1. Introduction

NextFEM Designer is a user-friendly Finite Element Analysis program, which can be used alone or to be a pre- or post-processor for several widely used FEM programs (i.e. OOFEM, SAP2000, Midas GEN, OpenSees, ABAQUS/CalculiX, Zeus-NL, and others).

The most important features are:

- general pre-processor capabilities: 3D and 2D views, customizable colours, accelerated rendering with *DirectX* technology;
- modelling with the most common structural elements, such as beams, shells and solid elements;
- importing input files from DXF drawings, OpenSees scripts, Midas GEN, SAP2000, ABAQUS, OOFEM, Zeus-NL;
- importing results from SAP2000, OOFEM and OpenSees;
- exporting models to SAP2000, ABAQUS, Midas GEN, OpenSees, OOFEM;
- post-processing capabilities with deformed shapes with contour display, beam diagrams, stress and strain contour.

1.1. License Activation

To activate the program you must be connected to the Internet at the first run. For the licensed installation, please refer to the command *?/License…*.

1.2. Manual and Support

Along with NextFEM Designer is provided the user manual which describes the main controls and procedures to get started with the program. Moreover, online support is available. It is possible to ask questions or give suggestions in the dedicated part of the NextFEM forum (www.nextfem.it/it/nextfem-designer-support-forum/).

1.3. User interface

Display window looks like the figure below. It is possible to show the model (extruded or not), number of nodes or element, loads applied, global axes and other properties of the opened file. On the bottom left corner, number of nodes and elements of the model are shown.
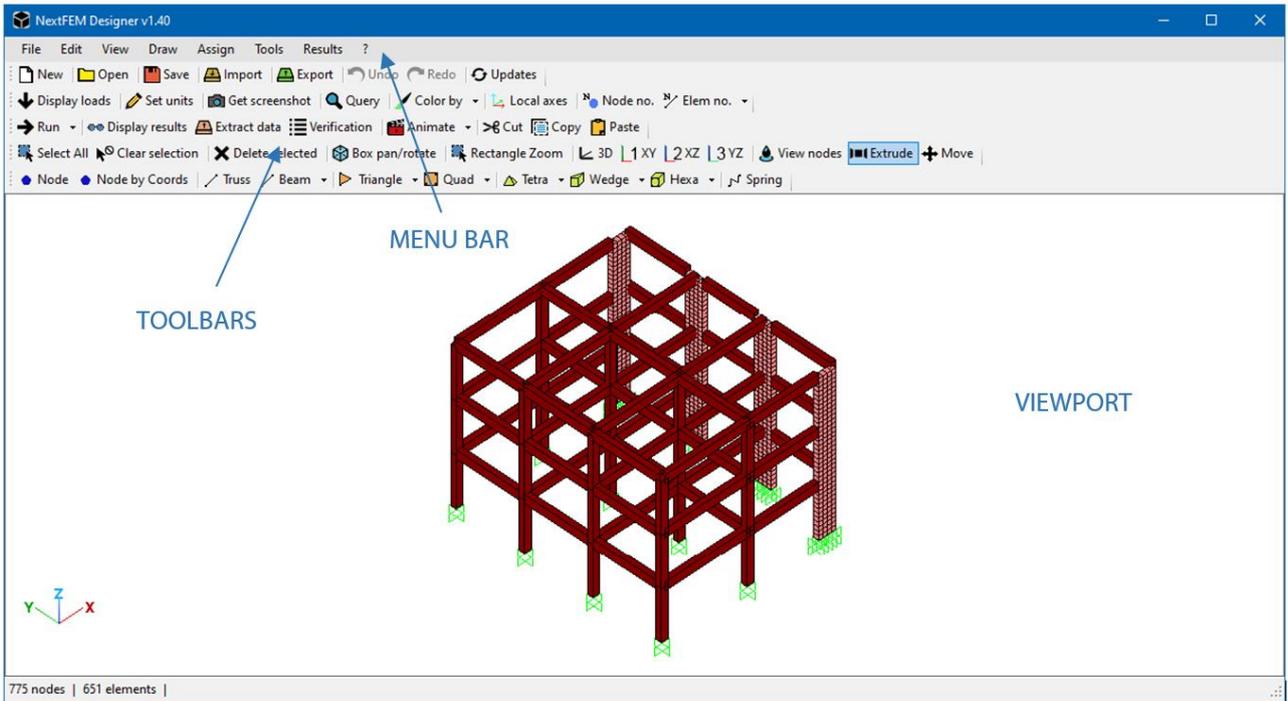
2. Basic usage of NextFEM Designer

2.1. User controls

Mouse usage

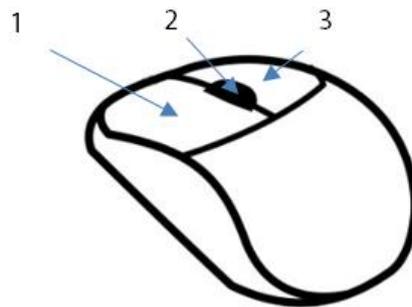- *1* Button one permits to select objects in viewport by:
  - o *Single object selection:* clicking on nodes or elements;
  - o *Window selection:* by pressing and holding down the button, elements can be selected. Dragging the mouse from left to right only elements and nodes entirely contained in the window are selected. Dragging the mouse from right to left every element or nodes that intersect the window will be selected.
- *2* Button two (the mouse wheel) has a double function. Holding down it and moving the mouse, the model moves; scrolling it, zoom changes.
- *3* Holding down the button three, the model rotates.

Keyboard shortcuts

- *Ctrl+X*: Cut selected objects;
- *Ctrl+C*: Copy selected objects;
- *Ctrl+V:* Paste selected objects;
- *Ctrl+N:* new model;
- *Ctrl+O:* opens a model;
- *Ctrl+S:* saves the model;
- *Ctrl+Z:* undo operations in the model;
- *Ctrl+Y:* redo operations in the model;
- *Esc:* clears current selection;
- *Ctrl+A:* selects the entire model;
- *Ctrl+D:* deselects all nodes;
- *Ctrl+Q:* opens Query dialog;
- *Ctrl+G:* opens Verifications window;
- *Ctrl+W:* integrates the selected section cut (only when results are displayed);
- *Canc:* deletes selected nodes and elements;
- *F1:* **opens the user's manual;**
- *F2:* shows selection only;

- *Ctrl+F2:* hides selection;
- *F3:* show view options;
- *F4:* shows the entire model;
- *F5:* show/hide nodes;
- *F6:* activate/disable extruded view;
- *F7:* shows node numbers;
- *F8:* shows element numbers;
- *F9:* shows nodal masses;
- *F10:* shows values in beam diagrams;
- *F11:* shows values in displayed loads;
- *F12:* shows constraints in the model.

Command line options

The following command line options are available:

- (-i *filename.ext*)   allows to import a file specifying *filename*;
- (-c nodes)   checks for free nodes in the loaded model;
- (-c elems)   checks the counter-clockwise element connectivity in the loaded model;
- (-e *filename.ext*)   allows to export the open model specifying *filename*, according to the specified extension *ext*.
  Available formats are:
  - o ".s2K": SAP2000 text file;
  - o ".mgt": Midas GEN text file;
  - o ".dxf": DXF drawing file;
  - o ".tcl": OpenSees script;
  - o ".inp": ABAQUS/CalculiX input deck;
  - o ".in": OOFEM input deck;
  - o ".dat": ADAPTIC / Zeus NL input deck;
  - o ".ifc" and ".ifcxml": IFC4 file format for BIM.
- (-d data item dir) : extract data from the result file loaded and save selected output in CSV format; the following flags are currently supported:
  - o *data*: data type to be extracted: "react", "disp" or "solls" for reactions, displacements or beam forces, respectively;
  - o *item*: number of node/element or "all" for the sum for all nodes/elements;
  - o *dir*: direction 1 2 3 4 5 6, according to global conventions (for nodes) or local ones (elements).
- (-r) : run the loaded/imported model
- (-s [*filename.ext*]) : save the loaded/imported model
- (-p) : print the model report in PDF format
- (-x) : closes the program after the batch operations as per any of the previous commands. The flag "-d" does not need this because it exits anyway.

2.2. Local axis conventions
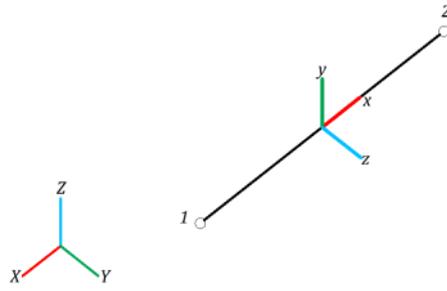
The following conventions are adopted for elements. Keep in mind that all the output forces/stresses/strains such as beam diagrams or area stresses are plotted with the following conventions along the local element axes.
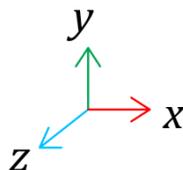
Beams

The second axis is always vertical and coincident with global Z.

Sections
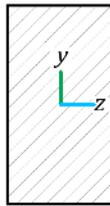
Planar elements
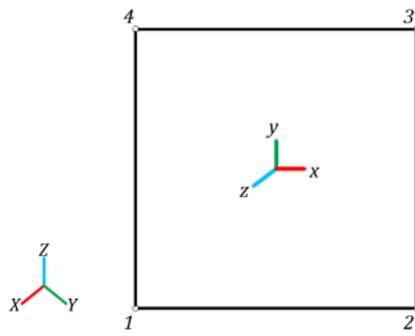
Solid elements

Section cut

8
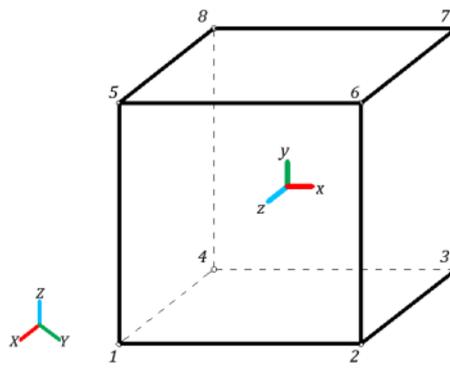
Section cut
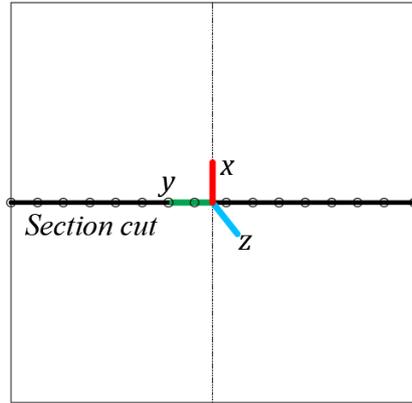
3. Import/export models

NextFEM Designer allows to import models from several file formats from the most spread Finite Element programs.

All the commands are accessible form the Import command under File menu.

Import: Imports model from other formats

3.1. Import

OpenSees

OpenSees has native text files to be imported directly.

Pre-processing features:

- Nodes
- UniaxialMaterial (partial reading)
  - elastic
  - elasticPP
  - elasticPPgap
  - ENT
  - Concrete01
  - Concrete02
  - Concrete03
  - Steel01
  - Steel02
- NDMaterial
  - ElasticIsotropic
- Section (partial reading)
  - Fiber
  - PlateFiber
  - LayeredShell
- Elements
  - ShellMITC4
  - quad
  - bbarQuad
  - enhancedQuad
  - quadUP (both)
  - ShellDKGQ
  - ShellNLDKGQ
  - ShellNL (treated as 8-node shell)
  - ElasticBeamColumn
  - ElasticTimoshenkoBeam
  - ForceBeamColumn
  - DispBeamColumn

- o beamWithHinges
- o truss and trussf
- o corotTruss
- o rotspring2dir
- o zeroLength
- o zeroLengthND
- o zeroLengthSection
- o stdBrick
- o bbarBrick
- o Brick8N
- o brickUP
- o Brick20N
- o 20_8_BrickUP
- Fix, fixX, fixY, fixZ Commands
- GeomTransf Commands
- Uniform Beam Loads
- Nodal Loads

Post-processing features:

- Displacements recorder
- Reactions recorder
- Modal Eigenvectors recorder
- Custom spring data

⚠ WARNING: Import from OpenSees could be incomplete. Please always use recorder as complete as **possible in DoFs and objects (ex. "recorder Node** -file disp.out -time -nodeRange 0 124 -dof 1 2 3 4 5 6 **disp").**

Midas GEN®

This feature is active only when ImportExport module has been licensed.

Into Midas GEN, select the command *File / Export / Midas Gen MGT file … .* You'll get a **text**ual MGT file that can be imported in Designer.

To import a model from Midas GEN, click on the *Import* option in the *File* menu and choose the *Midas GEN text file (*.mgt)* option from the *file type* drop-down list.

Pre-processing features:

- Nodes
- Elements
    - o Beam
    - o Truss
    - o Plate
    - o Wall
    - o Elastic link
- Frame Sections
    - o Rectangular
    - o Circular
- Plate and Wall sections
- Material
- Member assignments
- Constraints
- Frame releases
- Static load cases

11

- Load combinations
- Distributed beam loads
- Point loads
- Beam rebar
- Column rebar
- Wall rebar

Post-processing features:

- Beam forces from table
- Nodal displacements from table

SAP2000®

To import a model from SAP2000®, click on the *Import* option in the *File* menu and choose the *SAP2000 text file (*.s2k)* option from the *file type* drop-down list.

The supported pre-processing features are:

- Joint coordinates
- Joint restraint assignments
- Frame connectivity
- Link connectivity
- Area connectivity
- General frame section properties
- Area section properties
  - o Rectangular
  - o circular
- General frame release assignments
- Frame section assignments
- Area section assignments
- Basic mechanical material properties
- Joint loads
- Beam distributed loads
- Load case definitions

Post-processing features:

- Modal periods and frequencies
- Joint displacements
- Joint reactions
- Frame element forces
- Shell element forces
- Shell element stresses

OOFEM

Pre-processing features:

- Analysis type
- Node
- Rigidarmnode
- Beam3D
- Truss3D
- quad1mindlinshell3d
- mitc4shell
- tr_shell01
- tr_shell02
- LSpace

12

- LTRSpace
- QSpace

Post-processing features:

- Node displacements
- Node reactions
- Element forces and moments
- Element strains
- Element stresses

ADAPTIC and Zeus-NL

Pre-processing features:

- Materials
- Groups
- Structural Nodal Coordinates (with or without repetitions)
- Non-structural Nodes (with or without repetitions)
- Element connectivity (with or without repetitions)
    - CBP3
    - CBP2
    - LNK3
    - JEL3
    - IN16 (partitioning supported)
    - BK20 (partitioning supported)

Post-processing features for NUM files:

- Nodal displacements
- Nodal velocities (disable by default, check Options)
- Nodal accelerations (disable by default, check Options)
- Reactions
- Frame diagrams for cbp2, cbp3, lnk3 (in global coordinates), jel3.

ABAQUS® and CalculiX

Pre-processing Import features:

- Nodes
- Element
    - B22
    - B23
    - B31
    - B33
    - S3
    - CPS3
    - S4
    - S4R
    - CPS4
    - C3D4
    - C3D10
    - C3D8
    - C3D20

Post-processing features:

- Not available yet

Dxf drawing

Pre-processing features:

- Points
- Line elements

⚠ WARNING: The correctness of the results is not guaranteed. Check carefully your model after import.

Straus7®

This feature is active only when ImportExport module has been licensed.

Into Straus7, select the command *File / Export* and choose *Straus7 text file* as type . In the subsequent window, choose a format higher than 2.2.x. Version 2**.2.0 and below are not supported. You'll get a text file that can be** imported in Designer.

To import a model from Straus7, click on the *Import* option in the *File* menu and choose the *Straus7 file (*.txt)* option from the *file type* drop-down list.

Pre-processing features:

- Units
- Nodes
- Beam
- Beam3
- Tri3
- Quad4
- Hexa8
- Beam rotation angles
- Restraints
- Rigid links
- Master-slave links
- Masses
- Beam sections (rectangular, round, I, angle, C, T, pipe, rect. tube)
- Shell sections
- Nodal forces
- Global distributed forces on beams
- Local distributed forces on beams

⚠ WARNING: Straus7 uses section principal axes to plot beam diagrams. Designer rotates beam forces to be compliant to beam local axes.

SismiCAD®

This feature is active only when ImportExport module has been licensed.

Importing SismiCAD models is documented in the Italian version of this manual.

Namirial CMP® e Castalia SARGON®

This feature is active only when ImportExport module has been licensed.

Importing Open Sargon models is documented in the Italian version of this manual.

CDM DOLMEN®

This feature is active only when ImportExport module has been licensed.

Importing CDM DOLMEN models is documented in the Italian version of this manual.

BIM files – IFC and IFCxml

Import of BIM models is supported for IFC and IFCxml formats. During import, IfcWall elements are automatically meshed with quad elements in a structured mesh. The mesh dimension can be set in the program options. Therefore, tolerances on position of windows and doors do not exceed the half of mesh size.

The following elements can be read:

- IfcBeam (Swept Solid body, Curve2d and Mapped body representations)
- IfcColumn (Swept Solid body, Curve2d and Mapped body representations)
- IfcWall (Swept solid representations)
- IfcSlab (Swept solid representations)
- IfcFooting (Swept solid representations)
- IfcReinforcingBar
- IfcStructural classes.

3.2. Export

ABAQUS®

- Nodes
- Elements
  - B33
  - CPE2
  - CPS3
  - S3
  - CPE4
  - CPS4

OpenSees

- Nodes
- Elements
  - elasticBeamColumn
  - ShellMITC4
  - twoNodeLink (for springs)
  - stdBrick
  - Brick20N
- Sections
  - PlateFiber
- Isotropic Materials
  - nDMaterial ElasticIsotropic
- Restraints
- Nodal loads

Midas GEN®

- Nodes
- Elements
  - Beam
  - Triangular plates
  - Quadrilateral plates
- Groups
- Isotropic materials
- Wall and plate sections
- Restraints
- Elastic link
- Nodal masses
- Loads cases
- Concentrated loads
- Beam distributed loads

SAP2000®

This feature is active only when ImportExport module has been licensed.

- Joints
- Frame connectivity
- Area connect
- Basic material properties
- Frame sections
- Area section (⚠ WARNING: thick shells with drilling DOFs)
- Section assignments

16

- Load cases (⚠ WARNING: Self weight set to zero)
- Restraints
- Linear links(⚠ WARNING: not yet supported)
- Concentrated masses
- Concentrated loads
- Beam distributed loads
- Groups

OOFEM

- Analysis
  - Linear static
- Nodes
- Elements
  - Beam3D
  - Truss3D
  - Tr_shell01
  - Quad1mindlinshell3d
  - Lumped mass
  - LTRSpace
  - LSpace
  - QSPace
- Sections
- Isotropic materials
- Boundary conditions
- Sets

Dxf

- Points
- Line elements
- Plain elements (⚠ WARNING: triangular and quadrilateral only)

BIM files – IFC e IFCxml

- IfcBeam (Swept Solid body, Curve2d and Mapped body representations)
- IfcColumn (Swept Solid body, Curve2d and Mapped body representations)
- IfcWall only for walls defined as group of shell (see *Edit/Mesh wall* command) (Swept solid representations)
- IfcSlab (Swept solid representations)
- IfcFooting (Swept solid representations).

IDEA StatiCa 10

Only beams associated to a *Steel* material can be exported. The export procedure targets IDEA StatiCa Connection.

To design the **joint in IDEA StatiCa Connection, the corresponding node must have the "Node isJoint" attribute, to** be assigned by the command *Edit/Change element type*.
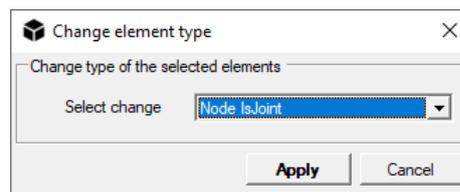
Under *Tools / Options*, you can set the path of IDEA StatiCa installation folder, in order to let Designer open StatiCa for you.

You can also control the exporting behaviour:

- check "Use IDEA wizard" to let IDEA show you the IDEA Connection wizard after export;

- enable **"Force all combos to be considered"** to force IDEA to show all the load combinations defined in your model.
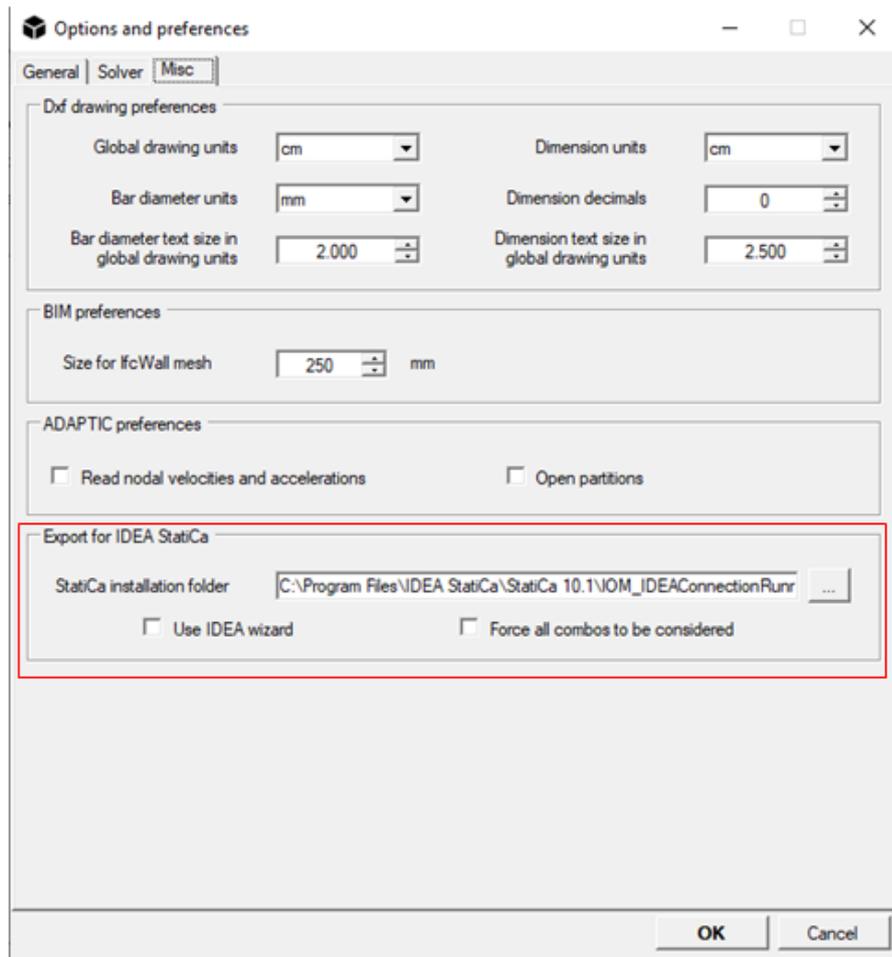
⚠ WARNING: results are limited to 5 stations along the beam. **Only "linear add" combinations are exported,** while envelope ones are excluded.

⚠ WARNING: the correct export of geometry and results is not guaranteed. In particular, it must be reported that the built-in steel library does not include the values for fy,40, which is required by IDEA StatiCa. For this reason, the fy,40 value is assumed as the 92% of the value of fy.

4. Importing results

Special importing procedures are available for Midas GEN® and Straus7® results. Such features are active only if the ImportExport module has been licensed.

4.1. Importing results from Midas GEN®

The program can import results related to:

– Beam forces

– Truss forces

– Wall forces

– Nodal displacements

Designer imports the tables available in Midas GEN under the command:

– Results / Result tables / Beam / Force for beam forces

– *Results / Result tables / Wall / Force/moment* for wall forces

– *Results / Result tables / Displacements* for nodal displacements.

Results need to be imported only <u>after</u> the model has been imported into Designer from a *.mgt* file, otherwise errors can arise. In particular, the user has to check that all the base load cases and all the desired combinations have been imported correctly from *.mgt*.

In Designer, each copied table can be pasted in a text file (any file extension can be used, eg. *.txt*) and the file can be dragged into the whiteboard inside the command *File/Import additional datasets*. As an alternative, the table can be pasted directly in the whiteboard. Select *Midas GEN results* in the upper dropdown and then press OK.
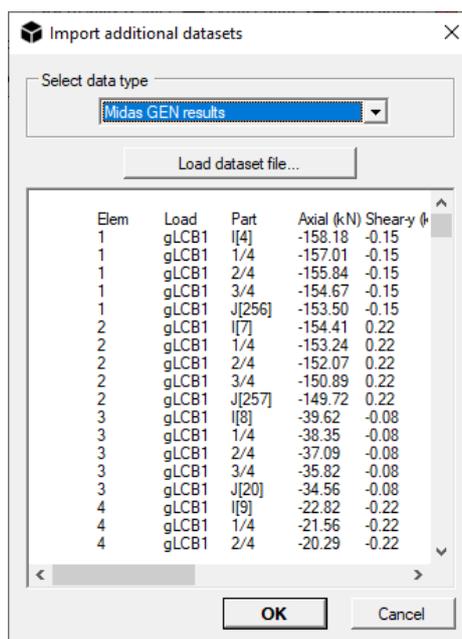
4.2. Importing results from Straus7®

The program can import results related to:

– Beam forces

– Nodal displacements

Designer imports the tables available in Straus7 under the command:

– Results / Listings.

Select *Multiple cases* in the Results viewer window, in the lower left corner. Enable all the basic loadcases you want to export. Please make sure that, right-clicking on the table, *Column separator: TAB* is enabled.

For the nodal displacements tab, right click on the table, click on *Select All* command, then again from the right button menu click on *Copy (+ Fixed Cells)*.

For the beam results tab, firstly make sure to have the following settings for dropdown menus in the upper left corner:
VIEW: Beam stations

SORT: All beams

SORT USING: Actual values

FILTER ON: All beams

Then right click on the table, click on *Select All* command, then again from the right button menu click on *Copy (+ Fixed Cells)*.

In Designer, each copied table can be pasted in a text file (any file extension can be used, eg. *.txt*) and the file can be dragged into the whiteboard inside the command *File/Import additional datasets*. As an alternative, the table can be pasted directly in the whiteboard. Select *Straus7 results* in the upper dropdown and then press OK.
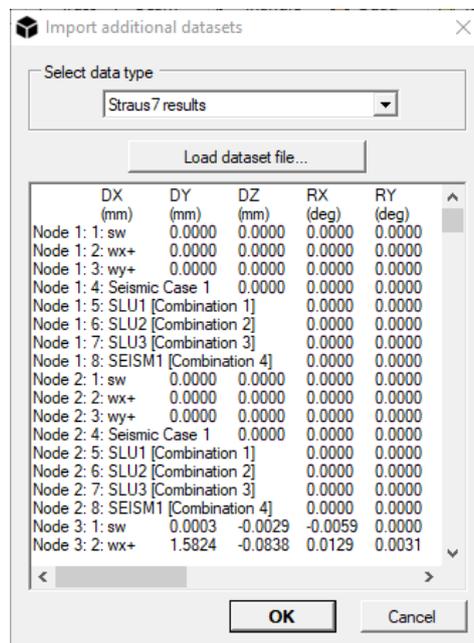
Now results are imported. Since only the basic data for each material is imported, please check the list of applied materials under **Edit/Materials…** and eventually change their properties. Checking type and other characteristics cannot be read from the imported Straus7 model.

5. License Terms

END USER LICENSE AGREEMENT

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1. NextFEM software is auto-installing. Once the installation is performed, the software is considered as accepted by the Customer.

2. Any other service (e.g. installation, verification, assistance requested by the Customer to let his employees to use NextFEM **software) will be performed by NextFEM SRLS after a Customer's request and in any case after a quotation made by NextFEM Srls** and its acceptance by the Customer.

3. The Customer is solely responsible that his technological equipment (hardware and software) meets the minimum and **essential requirements to install and use the software, as indicated in the users' manual included in the program.**

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1. The Customer must use NextFEM software for lawful and legal purposes.

2. The Customer undertakes to not remove or alter any trademarks, serial number or other information related to right reservation, which are included in software produced by NextFEM SRLS, even after the termination of the present agreement.

3. According to the Italian law art. 64 ter Law 22nd of April 1941, n. 633 as amended and supplemented and art. 5 par. 2 Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 as amended and supplemented, it is allowed to the Licensee Customer, having the right to use a copy of the software produced by NextFEM SRLS, to make a back-up copy of the software and of the included documentation, so far as it is necessary for that use.

4. According to the Italian law art. 64 bis, lett. a) and b) ,64 ter Law 22nd of April 1941, n. 633 as amended and supplemented and art. 4 par. 1 lett. a) and b) Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 as amended and supplemented, it is explicitly forbidden to the Customer the permanent or temporary reproduction of the software produced by NextFEM SRLS and of the included documentation, by any means and in any form, in part or in whole, without the authorisation by the right-holder. In so far as loading, displaying, running, transmission or storage of the aforementioned software necessitate such reproduction, even such acts shall be subject to authorisation by the right-holder. At the same conditions and with the same restrictions, it is equally forbidden to the Customer the translation, adaptation, arrangement and any other alteration of the software produced by NextFEM SRLS and of the included documentation and the reproduction of the results thereof, without prejudice to the rights of the person who alters the program.

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7. According to the Italian law art. 64 quater Law 22nd of April 1941, n. 633 as amended and supplemented and art. 6 Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 as amended and supplemented, the previous authorisation of NextFEM SRLS shall not be required where reproduction of the code and translation of its form within the meaning of art. 64bis, lett. a) and b) Law 22nd of April 1941, n. 633 as amended and supplemented and of points (a) and (b) of Article 4 par.1 are done to modify the form of the code and are indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs, provided that the following conditions are met:
(a) those acts are performed by the Licensee or by another person having a right to use a copy of a program, or on their behalf by a person authorised to do so;
(b) the information necessary to achieve interoperability has not previously been readily available to the persons referred to in point (a);
(c) those acts are confined to the parts of the original program which are necessary in order to achieve interoperability.

8. The provisions of preceding paragraph 7 shall not permit the information obtained through its application:
(a) to be used for goals other than to achieve the interoperability of the independently created computer program;
(b) to be given to others, except when necessary for the interoperability of the independently created computer program;
(c) to be used for the development, production or marketing of a computer program substantially similar in its expression, or for any other act which infringes copyright.

9. In accordance with the provisions of the Berne Convention for the protection of Literary and Artistic Works, enacted in Italy with the Italian law 20th of June 1978, n. 399 as amended and supplemented, the provisions of article 64 quater Law 22nd of April 1941, n. 633 as amended and supplemented and art. 6 of Directive 2009/24/EC of the European Parliament and of the Council of 23rd April 2009 as amended and supplemented may not be interpreted in such a way as to allow its application to be used in a manner which unreasonably prejudices the right-holder's legitimate interests or conflicts with a normal exploitation of the computer program.

Art. 6 – Property – Transfer prohibition –

1. The software provided by NextFEM SRLS and the included documentation remain exclusive property of NextFEM SRLS. The Customer is explicitly forbidden to distribute products of NextFEM SRLS or copies to anyone or to sell them or assign them in license to third parts or to lease them, or in any case to allow others to use the programs, either in exchange for payment or not. In these cases, NextFEM SRLS can revoke the user's license of the free program or of any of the paid modules at any time.

2. This clause will remain in force even after the rescission or the termination to any title of this contract.

Art. 7 – Right holders – Secret – Modifications –

1. The software provided by NextFEM SRLS, the included documentation, the program code, its layout, the structures and the program files organization, the program name, the Company logo and any other representation form within the software are subjected to copyright; this one, and any rights coming from it or in any way connected to the copyright are property of NextFEM SRLS. Other trademarks belong to the respective owners.

2. The Customer is required to keep secret the content of the software provided by NextFEM SRLS and the included **documentation, and to protect NextFEM SRLS and his suppliers' rights; in** particular, the Customer is required either to make no modifications to the software provided by NextFEM SRLS or to incorporate it entirely or in part in other software without preventive written authorisation by NextFEM SRLS, without prejudice to current mandatory legislation on the matter. In these cases, NextFEM SRLS can revoke the user's license of the free program or of any of the paid module at any time.

3. This clause will remain in force even after the termination or the expiration in whatever manner of this agreement.

Art. 8 – Fee – Solve et repete –

1. **NextFEM SRLS provides the software "as is" and is not obliged to provide maintenance, support, updates, improvements or** changes. Different conditions may apply to paid software and for Education licenses.

2. To ensure the continuity of the license and of paid modules, the Customer must pay the relative fee at least 15 days before the **current license expires; if the deadline is not respected, NextFEM SRLS can't guarantee such continuity, and the l**icensed modules may be blocked. For no reason the payment of the annual fee regarding the software and/or its single component module and/or required services can be delayed or suspended; eventual exceptions or Customer's disputes will be managed and solved separately.

3. NextFEM SRLS provides software updates for 12 (twelve) months starting from the delivery date, limited to the functionalities of paid module/s. During this period, encountered malfunctions in paid modules will be fixed to ensure the correct functionality. This guarantee does not apply to functionalities not included in the paid modules.

Art. 9 – Warranty and liability –

1. **For both the basic software version and the paid modules, NextFEM SRLS provides the software "as is" and it is not o**bliged to provide maintenance, support, updates, improvements or changes. During the validity of this agreement, eventual software updates or patches may be released.

2. NextFEM SRLS is committed, only for functionalities of the paid modules, and for 12 months from the purchase, to keep the software able to perform the tasks described in the user manual. During this period, encountered malfunctions of the paid modules will be fixed to ensure the correct functionality. This guarantee does not apply to functionalities not included in paid modules, nor to Educational licenses, as stated in art. 14 of this agreement.

3. **The warranty is conditioned to the correct original functioning of the Client's machine, hardware and system software and** the existence of the minimum requirements prescribed for the correct software installation, as well to the circumstances in which the Customer installs the updates and patches that can be made available by the Licensor via an independent download made from the nextfem.it website, and also to the correct use of the system and software by the Customer.

4. The Customer is the sole responsible for the choice of the software produced by NextFEM SRLS and its compliance to his own needs and purpose of use, for any input fed to the software and any output coming from the program or from its parts, and must verify results, reports and the checks conducted with it.

5. The software provided by NextFEM SRLS are a representation of the current state of development, so NextFEM SRLS cannot grant that they will always work correctly in every applications and in any situation.

6. Customer is responsible of installation, launch, and usage of the software produced by NextFEM SRLS and of the application of the related updates and patches, their transfer to the computer, the settings, and everything not explicitly stated in this Contract that burden on NextFEM SRLS.

7. This warranty is not valid whenever a software fault is due to accident, improper and/or non-conforming and/or wrongful usage. Any change to the software made directly by the Customer will result in the withdrawal of this warranty.

8. NextFEM SRLS does not take any responsibility and is not liable for any direct and/or indirect, special, collateral, incidental and/or consequential damage, including lost profits, incurred by the Customer or third parts caused through the use or lack of use of the software and by any means related and/or consequential to eventual software quality, adequacy, use and usability flaws, which are therefore to be exclusively borne by the Customer, except as what is compulsorily required by law.

9. NextFEM SRLS does not take any responsibility and is not liable for any direct and/or indirect, special, collateral, incidental and/or consequential damage, including lost profits, incurred by the Customer or third parts caused through the use or lack of use of the software and by any means related and/or consequential to eventual software quality, adequacy, use and usability, caused by suppliers or by parts of program developed by third parts. To these parts of programs developed by third parts are applied their own licensing conditions, which can be found inside NextFEM SRLS software from *? / Information …*.

Art. 10 – Software restitution - Software deletion –

1. Within one month from the termination of this agreement for any reason, the Customer must delete and eliminate any copy of the software he owns, even if they are backup copies. The Customer must confirm this by sending to NextFEM SRLS an e-mail within the same deadline.

2. As a consequence of the termination of this agreement as in the previous subparagraph, the license of use is revoked and cannot be use anymore by the Customer for any purpose.

Art. 11 – Support and/or consultation -

1. Upon Customer's request, NextFEM SRLS is willing to give, by a preventive stipulation of specific separate contracts, the necessary support and/or consultation to maintain or launch or update or personalize or implement the software provided by NextFEM SRLS, also for a potential training of Customer's staff who is appointed for its use.

2. The possible existence of other contractual relationships between NextFEM SRLS and the Customer does not affect other connections between them, that will remain separated and independent.

3. The free licenses of use granted by NextFEM SRLS (i.e. basic program, Educational license, etc.) are not covered by any kind of support.

4. The paid licenses of use granted by NextFEM SRLS to the Customer can be issued with a first-installation assistance via email, until 7 days after the payment. Further paid support can be supplied for one year starting from the license acquisition. Support period can be bought or renewed only together with the program license or renewal, respectively. Assistance is supplied only via email and concerns the sole software use or program functioning. NextFEM SRLS does not supply support on the engineering choices made or to be made for designing any structures. Any advice given by support cannot substitute the engineering judgement of the Customer, who is the sole responsible of the structure designed, analysed and checked with the program, including the obtained results.

Art. 12 – Communication -

1. Any communication from one part to another of this agreement must be sent as a registered letter with signed return receipt or as a hand-delivered registered letter addresses to "NextFEM SRLS, Piazza del Foro Romano 12, 31046 Oderzo (TV)" or as a certified e-mail to nextfem@pec.nextfem.it.

Art. 13 – Litigation – Applied law -

1. This contract is subjected to the Italian law.

2. Any litigation in any case connected to this agreement shall be exclusively of the competence of the Court of Treviso.

Art. 14 – Educational license –

1. Educational licenses are distributed for a predetermined number of PCs prior oral or written agreement with NextFEM SRLS. NextFEM SRLS solely decides the number of distributed licenses prior consultation with the Customer.

2. Educational licenses can be given freely to a private or public Customer, when it is a training institution, a research and development company or a school, at the incontestable discretion of NextFEM SRLS. In such case, the given Educational licenses do not grant to the Customer the right to use them after the planned time period conceded to the Licensee, and they can be revoked at any time by NextFEM SRLS without any justification or notice to the Customer. In any case, Educational licenses cannot be used for commercial, professional or profit purposes.

3. When given freely, Educational license does not allow for any refund of the cost of the software, for any reason.

4. When given freely, Educational license does not allow for any kind of support supplied by NextFEM SRLS, neither for malfunctioning of the program. Hence, the warranties described in art. 9, paragraph 2 of this agreement are excluded.

Art. 15 – Changes of terms in this agreement –

1. The Licensor has the right to modify the conditions of the present License user's agreement for the software of NextFEM SRLS by email to be sent to the Licensee to the address given during registration on nextfem.it website. The Licensee has the right of withdrawal by sending a registered letter with signed return receipt or as a hand-delivered registered letter addresses to "NextFEM SRLS, Piazza del Foro Romano 12, 31046 Oderzo (TV)" or as a certified e-mail to nextfem@pec.nextfem.it compulsorily within 14 days from the receipt of the communication related to the changes of the agreement terms.

Art. 16 – Final provisions -

1. Whenever one of the clauses contained in this Contract will be declared invalid or without effects, entirely or in part, this will not invalidate the other clauses, except when the Licensor considers in bona fide the clause as essential, and consequently shall ask for the resolution of the contract.

2. For anything not expressively provided in this contract, the Italian Civil Code rules shall be applied and the Legislative Decree of 29th of December 1992, n. 518 as amended and supplemented, regarding the implementation of the Council Directive n. 91/250 CEE of 14th of May 1991 on the legal protection of computer programs which modifies and integrates Law 22nd of April 1941, n. 633, and this last law as amended and supplemented, and the Directive 2009/24/EC of the European Parliament and the Council of 23rd of April 2009 as amended and supplemented.

Oderzo (TV), (date of acceptance of this contractual conditions)

NextFEM SRLS   Licensee

Pursuant to and in accordance with art. 1341 and 1342 c.c., the Customer specifically approves, for having them read, understood and known, the articles: 2 (Duration – Agreement termination) paragraph 2, 3 (License delivery) paragraph 3, 4 (Installation) paragraph 3, 5 (Programs usage), 6 (Property – Transfer prohibition), 7 (Right holders – Secret – Modifications) paragraph 2, 8 (Fee – Solve et repete) paragraph 2, 9 (Warranty and liability) paragraphs 3,4,5,6,7,8,9, 10 (Software restitution - Software deletion) paragraph 4, 11 (Support and/or consultation), 13 (Litigation – Applied law), 14 (Educational license) paragraphs 2 and 3, 15 (Changes of terms in this agreement), 16 (Final provisions).

Oderzo (TV), (date of acceptance of this contractual conditions)

The Customer

NextFEM Designer uses:

> OOFEM v2.4
> ZedGraph Library v.5.1.5.31366
> Clipper Library v.6.1.3
> net Dxf Library v.0.9.1
> Poly2Tri Library
> RichTextBoxLinks Library
> SlimDX Library
> Jace Library
> UnitConversionLib Library
> Ionic Zip Library v1.9
> Triangle.NET Library Beta 4
> Netgen Mesh Generator Library v.6.0
> PDFSharp v.1.32
> RTF Document Constructor Library
> log4net Library v.1.2.15
> SharpZipLib Library v.0.86.0
> Esent Managed Interface v.1.9.4
> xBIM Essentials v.5
> xBIM Geometry v.5
> XbimWebUI for xBIM toolkit
> Desktop Bridge Helpers v.1.1.0
> DocX Library v.1.1.0
> Splicer Library v.1.0
> DirectShowLib v.2.1
> OpenStreetMap site
> IDEA StatiCa IOM

All the licenses, including the general one for the program and for paid modules, can be found in the dialog *?/About …* .