

# How IDEA StatiCa works with your other software?

## September 21, Noon - EDT

**IDEA StatiCa®**  
*Calculate yesterday's estimates*

**ETABS®**

**ETABS**

STEEL

**SAP2000**

**SAP2000**

STEEL

**Tekla Structures**

**Tekla Structures**

STEEL

**AUTODESK®  
REVIT Structures**

**Revit**

STEEL

**AUTODESK®  
ADVANCE STEEL**

**Advance Steel**

STEEL

**Tekla Structural Designer**

**Tekla Structural Designer**

STEEL

**ROBOT STRUCTURAL ANALYSIS PROFESSIONAL**

**Robot Structural Analysis Professional**

STEEL

**STAAD.Pro**

**STAAD.Pro**

STEEL



**RAM Structural System**

**RISA®**  
A NEMETSCHKE COMPANY

**RISA 3D (SAF)**

# Agenda

- Type of links
- Demonstration
  - STAAD.Pro/ETABS
  - Tekla Structural Designer
  - RAM Structural System
  - RISA 3D
  - Revit/Advanced Steel
  - Tekla Structures
- Q&A

The collage displays several key features of the IDEA StatiCa software:

- Top Left:** A detailed view of a connection design tool, showing options for side profiles, bolts, and connection types. It includes a 'W10X17' beam and a 'Tribble Connect' tool.
- Top Right:** A 3D model of a steel beam-to-column connection, with a 'Members' list on the right showing 'Member 1', 'Member 2', and 'Member 3'. Below it, a 'Load effects' list includes 'Work plane 1', 'Cut 1', 'Work plane 2', 'Cut 2', 'Plate 1', 'Plate 2', 'Plate 3', 'Plate 4', 'Plate 5', 'Plate 6', 'Plate 7', 'Plate 8', and 'Plate 9'.
- Middle Left:** A 3D wireframe model of a multi-story building structure, showing the overall frame and member layout.
- Middle Right:** A 3D model of a steel frame structure, showing the connection groups and their distribution across the building levels.
- Bottom Left:** A close-up view of a steel connection, showing the interaction between a beam and a column, with labels for 'Con 38' through 'Con 55'.
- Bottom Center:** A screenshot of the 'Checkbot' interface, showing a list of project items and a detailed view of a connection. The 'Checkbot' interface includes a 'Project' tab, 'Materials', and a 'List of project items' with a search bar. The connection details show a list of items (Con 38 to Con 55) and a 'Checkbot' status for each item.
- Bottom Right:** A detailed view of a connection, showing the 'Checkbot' status for various components: Analysis (100.0%), Plates (2.2 + 5.0%), Bolts (98.1 + 100%), Welds (98.7 + 100%), and Buckling (Not calculated).

# Type of link



FEA

- STAAD.Pro
- ETABS
- SAP 2000
- Tekla Structural Designer
- RAM Structural System
- RISA 3D (Just geometry)

BIM

- Tekla Structures
- Revit
- Advance Steel

# Checkbot

Project Materials

LCS Open Reset Calculate Sync Delete Loads Sync Merge Divide Settings Conversion Draw

Current item Structural model Options Member 1D Forces

Solid Transparent Wireframe

M87 [Design member]

**▼ Properties**

Name	M87
Elements	E87
Begin node	45 [1200.002;
End node	49 [1320.003;
Length [in]	120.000
Cross-section	13. W12X58 (
Material	STEEL
Rotation [°]	0.0
Eccentricity ey [in]	0.000
Eccentricity ez [in]	0.000

Manage **loads** from load configurator

Merge or divide members in the model

**Draw beam forces** in Checkbot. Select force and combination. Click on a connection cube and change view to Wireframe

Right click on connection item: Open, rename and send **connections** to a separate files or project.

Select elements and **offsets** as required

Project Materials

Connections Member Nodes Members Connections LCS Open Reset Calculate Sync Delete Loads Sync Merge Divide Settings Conversion Draw

N Mx Results DEAD LOADS Scale 1.00  
Vy My Global Local Extreme Local extre...  
Vz Mz

Import Labels Current item Structural model Options Member 1D Forces New

List of project items

- Con 4
- Con 4
- Con 4
- Con 48
- Con 49
- Con 50
- Con 51
- Con 52
- Con 53
- Con 54
- Con 55
- Con 56
- Con 57
- Con 58
- Con 59
- Con 60
- Con 109
- Con 110

Open Calculate Rename Reset Delete Export to Separate files Single project

Synchronize changes from the linked application

Manage loads from load configurator

Merge or divide members in the model

Draw beam forces in Checkbot. Select force and combination. Click on a connection cube and change view to Wireframe

Right click on connection item: Open, rename and send connections to a separate files or project.

Select elements and add offsets as required.

M87 [Design member]

Properties

Name	M87
Elements	E87
Begin node	45 [1200.002; 0.000; 120.000]
End node	49 [1320.003; 0.000; 120.000]
Length [in]	120.000
Cross-section	13. W12X58 (STEEL)
Material	STEEL
Rotation [°]	0.0
Eccentricity ey [in]	0.000
Eccentricity ez [in]	0.000

Support center News

Tutorials FAQ Webinars

26.10.2022 University Webinar: University of Tennessee Verifications of IDEA StatiCa connection through Checkbot will be demonstrated.

08.09.2022 The State of Structural Engineering in the US In spring 2021, IDEA StatiCa ran the first batch of research on the US's structural engineering market. The research's primary purpose was to

# STAAD.Pro/ETABS/SAP2000





# STAAD.Pro/ETABS/SAP2000

## Highlights

- Loads and geometry
- Node and members keeps the same name
- Sync is available if analysis/model is modified in the main application
- Plugin is called from the application
- Full model or just some joints

## Limitations

- No offsets





# Tekla Structural Designer





# Tekla Structural Designer

## Highlights

- Loads and geometry
- Improved link with 2022 SP2
- Connection with braces
- Multiple selection from Tekla Structural Designer
- Sync is available
- [Tekla Support center](#)

## Limitations

- Data is one-way from TSD to Checkbot.
- Large models

# RAM Structural System





Connection



Member



Checkbot



Detail



Open



Import

### Design of members, cross-sections and details



### Recent projects

- 76.ideaCon
- Behuer call.ideaCon
- HSS Column Base Plate.ideaCon
- stiffness.ideaCon
- CapacityandStiffness.ideaCon
- RBS-1.ideaCon
- Shear tab connection gusset to beam and column-HS

### News

- 08.06.2022  
**What's new in IDEA StatiCa 22.0? - US**  
Join us for the second webinar from the US team! This session will discuss the latest enhancements in V22 with a specific focus...
- 08.06.2022  
**Connection Wednesdays - New way of project collabora...**  
An effective process of structural design is something that most engineers and also their managers dream about. Clever sharing ...
- 26.05.2022  
**Problems with dead load are dead**  
Sometimes we are focused so much on complex tasks that some

Want to get certified?

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# RAM Structural System

## Highlights

- Loads and geometry
- All the RAM SS joints imported in Checkbot
- Offsets imported, top of steel considered
- Available from V22 of IDEA StatiCa

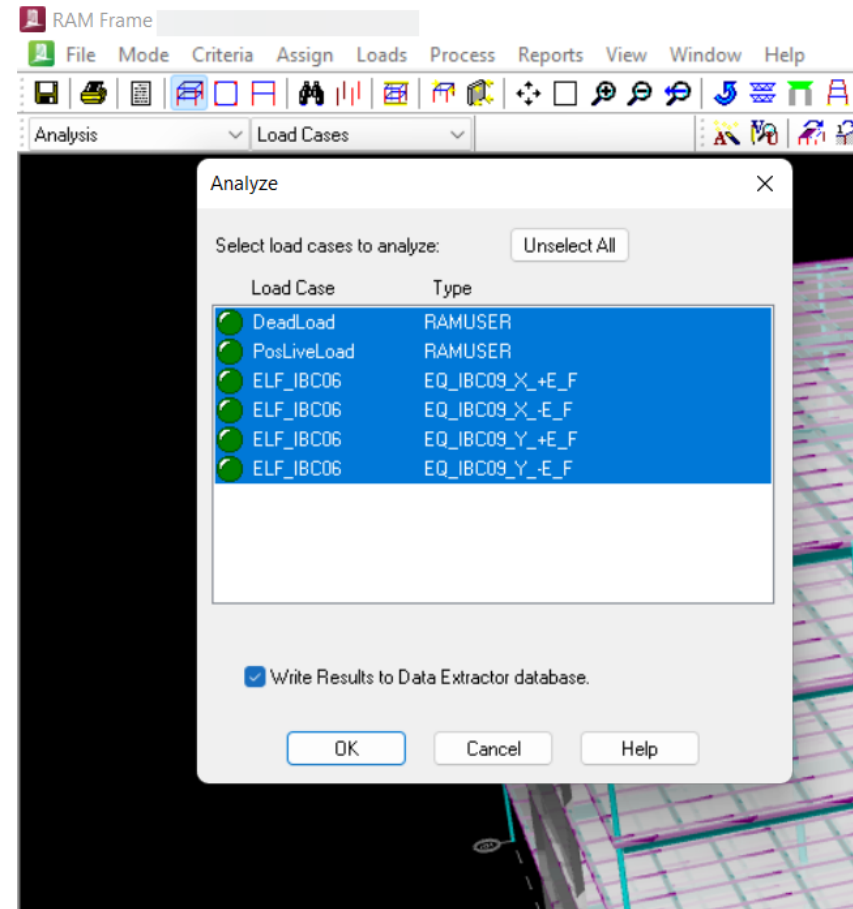
## Limitations

- One time import, no sync is available
- Mapping is needed for some profiles (steel joist, C-beam, etc.)
- No partial import



# Before importing...

- Database is closed and RAM Structural System is not running.
- A RAM Frame analysis is required
- 'Write Results to Data Extractor database' checked.
- The model should be saved once results have been completed.
- All elements should have a defined size.



# RISA 3D





# RISA 3D

## Highlights

- SAF File import (.xlsx file)
- Geometry and materials

## Limitations

- No loads imported
- No sync available
- No offset





Connection



Member



Checkbot

1

Any topology, any loading, in minutes



Detail



Open



Import



## Recent projects



Iteration 6.ideaCon



Base plates Axis A.ideaCon



Modified model with weld operations.ideaCon



modified model.ideaCon



HSS-W\_Moment.ideaCon



original.ideaCon



Beam To Beam -Test.ideaCon

## News

26.10.2022

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This webinar will introduce the results of a series of verification studies completed at the University of Tennessee. These ver...

21.09.2022

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### The State of Structural Engineering in the US

In spring 2021, IDEA StatiCa ran the first batch of research on the US's

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- ←
- Open
- New** 2
- Settings
- Information
- About
- Licences
- Exit

New project

**Project**

Project name:  3

Project folder:

Project type:  Steel  Concrete

**Settings**

Design code: ▼

Subcode: LRFD (AISC 360-16) ▼

4
**Create project**

- Support center
- Tutorials
- FAQ
- Webinars

News

<p>26.10.2022</p> <p><b>University Webinar: University of Tennessee Verifica...</b></p> <p>This webinar will introduce the results of a series of verification studies completed at the University of Tennessee. These verifications compared results from IDEA StatiCa to traditional calculations used in practice in the US. You will learn more about the process as well as discuss the results</p>	<p>21.09.2022</p> <p><b>How IDEA StatiCa works with your other software? - US</b></p> <p>In this webinar the process of linking different software with IDEA StatiCa connection through Checkbot will be demonstrated.</p>	<p>08.09.2022</p> <p><b>The State of Structural Engineering in the US</b></p> <p>In spring 2021, IDEA StatiCa ran the first batch of research on the US's structural engineering market. The research's primary purpose was to thoroughly map US structural engineers' habits, needs, and requirements. This year, we broadened the research by surveying even more companies in other states and regions.</p>
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IOM SAF RAM  
Import **4**

Nodes Members Connections LCS  
Labels

Open Sync  
Reset Delete  
Calculate  
Current item

Loads ><>  
Sync Merge Divide  
Structural model

Settings  
Conversion  
Options

Draw N Mx Results -  
Vy My Global Local  
Vz Mz  
Member 1D Forces

Scale 1.00  
Extreme Local extre...

Connection  
Member  
New

List of project items

There are no items in the project. Import joints and members by selecting one of the available model import options.

Open

< > << >> < 09-21 > RIS... > Search RISA DEMO

Organize New folder

Name	Date modified
Microsoft Team	
Recordings	
This PC	
Desktop	
Documents	
Downloads	
RISA FILE	9/16/2022 6:04 PM
Example.xlsx	9/8/2022 2:32 PM

File name: Example.xlsx XLSX files (\*.xlsx)

**5** Open Cancel

Support center

Tutorials  
FAQ  
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Import



Labels



Connections



LCS



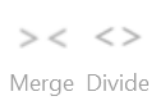
Open



Sync



Loads



Merge Divide



Settings



Conversion



Draw



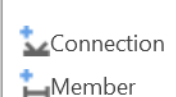
Member 1D Forces



Results LC3



Scale 1.00



New

List of project items

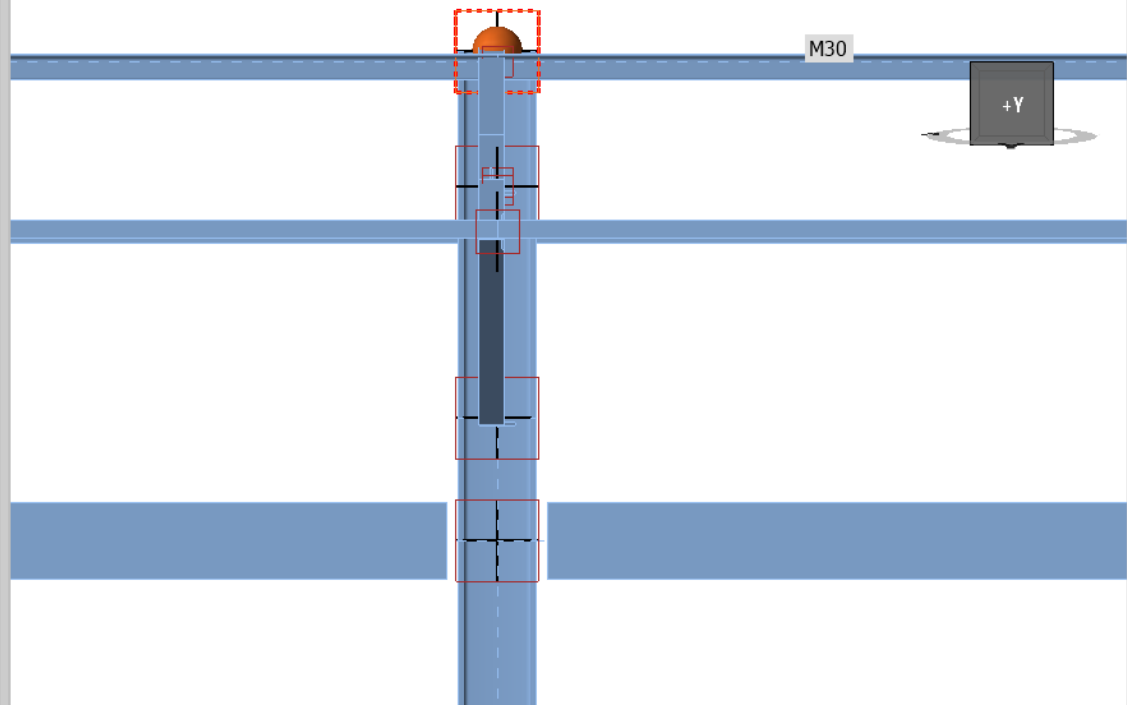


Solid Transparent Wireframe

N108 [Connection] Open Load update Reset

Connections

- N1
- N17
- N19
- N62
- N81
- N67
- N3
- N18
- N20
- N61
- N103
- N108**
- N21
- N137



Properties

Name	N108
Node	N108
Connected members	M2, M31, M33
Connection point	[120.000; 0.000; 122.004]
Loads	
Result class	All ULS Fund

Support center

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# Automatic Plugin installation for BIM Links

The screenshot displays the IDEA StatiCa software interface. The main window has a dark header with the logo and tagline "Calculate yesterday's estimates". Below the header, there are navigation tabs for "STEEL", "CONCRETE", and "BIM" (which is highlighted). A "Support center" link is also visible. On the left side, there is a "Checkbot" section with a button labeled "Activate your BIM link...". The main content area features a central text block: "IDEA StatiCa is a part of your workflow. Speed up your analysis and design process by importing data model from the most widespread FEA and CAD programs." Below this, there are three panels: "Beam Selection", "Design of Beam", and "Check EC / SIA", each showing a 3D model of a structural frame. At the bottom left, there is a button for "Open existing project" and "Import from other program".

On the right side, a separate window titled "IDEA StatiCa Calculate yesterday's estimates" displays a list of plugins and their installation status:

Plugin Name	Status
Advance Steel 2023	Target application not found
Advance Steel 2022	Installed
Advance Steel 2021	Target application not found
Revit 2023	Target application not found
Revit 2022	Installed
Revit 2021	Target application not found
Tekla 2022	Installed
Tekla 2021	Installed
Advance Design	Target application not found
Axis VM	Target application not found
ETABS 20	<a href="#">Please install our add-in for your ETABS 20</a>
ETABS 19	<a href="#">Please install our add-in for your ETABS 19</a>

# REVIT/Advanced Steel







# REVIT

## Highlights

- Connection model imported from Revit
- If loads are model in Revit, also loads can be imported
- Assign general connections and finish your design in IDEA StatiCa

## Limitations

- A connection must be modeled in Revit
- One way link



# Tekla Structures





# TEKLA Structures

## Highlights

- Connection model and geometry
- Sync is available
- Process:
  - Select node
  - Select members (support member first)
  - Select connection entities

## Limitations

- One way link
- Welded and composite cross-sections are not supported.
- Some welds are not detected, use recommended weld option
- The anchoring import is not supported
- Bulk selection available in ID V22.1
- [Workarounds for limitations](#)

# Q&A



# Thank you



David Eckrote

- Director
- David.Eckrote@ideastatica.com



Yann Gueguen

- Regional Engineer
- Yann.Gueguen@ideastatica.com



Andrea Castelo

- Product Engineer
- Andrea.Castelo@ideastatica.com