IDEA StatiCa®

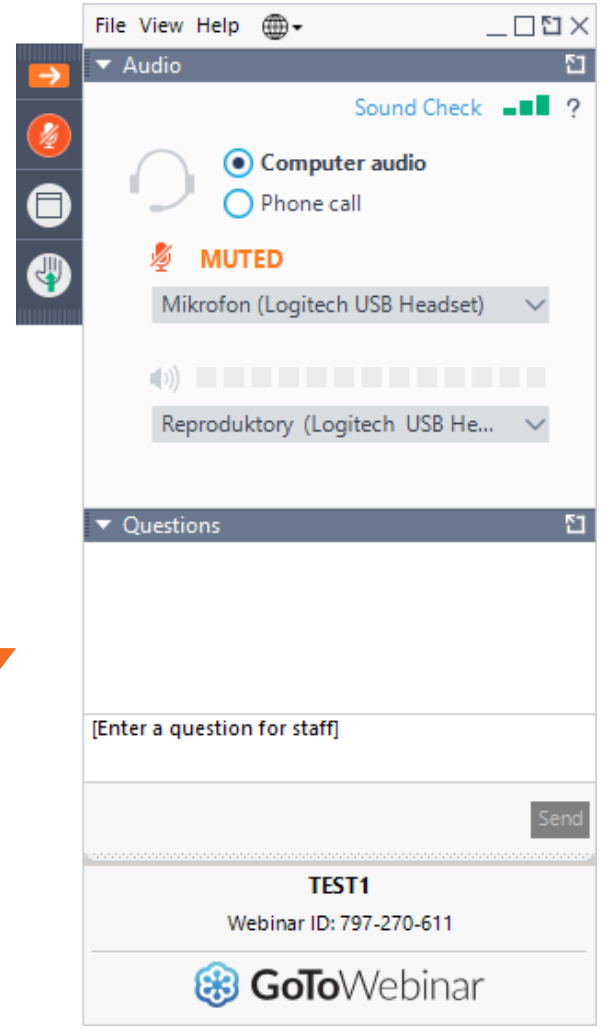
Calculate yesterday's estimates

IDEA StatiCa 24.1 Release Webinar

Control Panel

When you first join a session, the Control Panel appears on the right side of your screen. Use the Control Panel to manage your session. To free up space on your desktop, you can collapse the Control Panel and use the Grab Tab to continue to manage your session.

- **Grab Tab**: From the Grab Tab, you can hide the Control Panel, mute yourself (if you have been unmuted by the organizer), view the webinar in full screen and raise your hand.
- **Audio Pane**: Use the Audio pane to switch between Telephone and Mic & Speakers.
- **Questions Pane**: Ask questions for the staff.



QUESTIONS

HANDOUT AVAILABLE

AGENDA

Checkbot

- Nodes dynamic grouping
- Batch design

Connection app

- Templates automation: Parametric design
- Weld capacity estimation (Ut_c) AISC
- Measure tool
- Operations multi-select and multi-edit
- Project tab: multiple items in one file
- Default materials
- AISC Cross section database v16.0

LAST EVENT OF THE YEAR: ATLANTA MIXER

Date: Thursday, November 21, 2024
Time: 4–7 PM

Location: Bold Monk Brewery, 1737 Ellsworth Industrial Blvd NW, Atlanta, GA 30318

Agenda:

3:30 PM – Registration & Networking

4:00 PM – Connection Design with IDEA StatiCa

4:45 PM – Local user case study

5:30 PM – Happy Hour networking

Register here

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SUPPORTED INTEGRATIONS CHECKBOT

STAAD.Pro
STEEL

SAP2000
STEEL

Tekla Structures
STEEL

AUTODESK REVIT
STEEL

Bentley RAM Structural System
STEEL

ETABS
STEEL

RISA-3D
STEEL

ROBOT STRUCTURAL ANALYSIS PROFESSIONAL
STEEL

Tekla Structural Designer
STEEL

SDS2 BY ALLPLAN
STEEL

Rhinoceros
STEEL

AUTODESK ADVANCE STEEL
STEEL

https://www.ideastatica.com/bim-integrations

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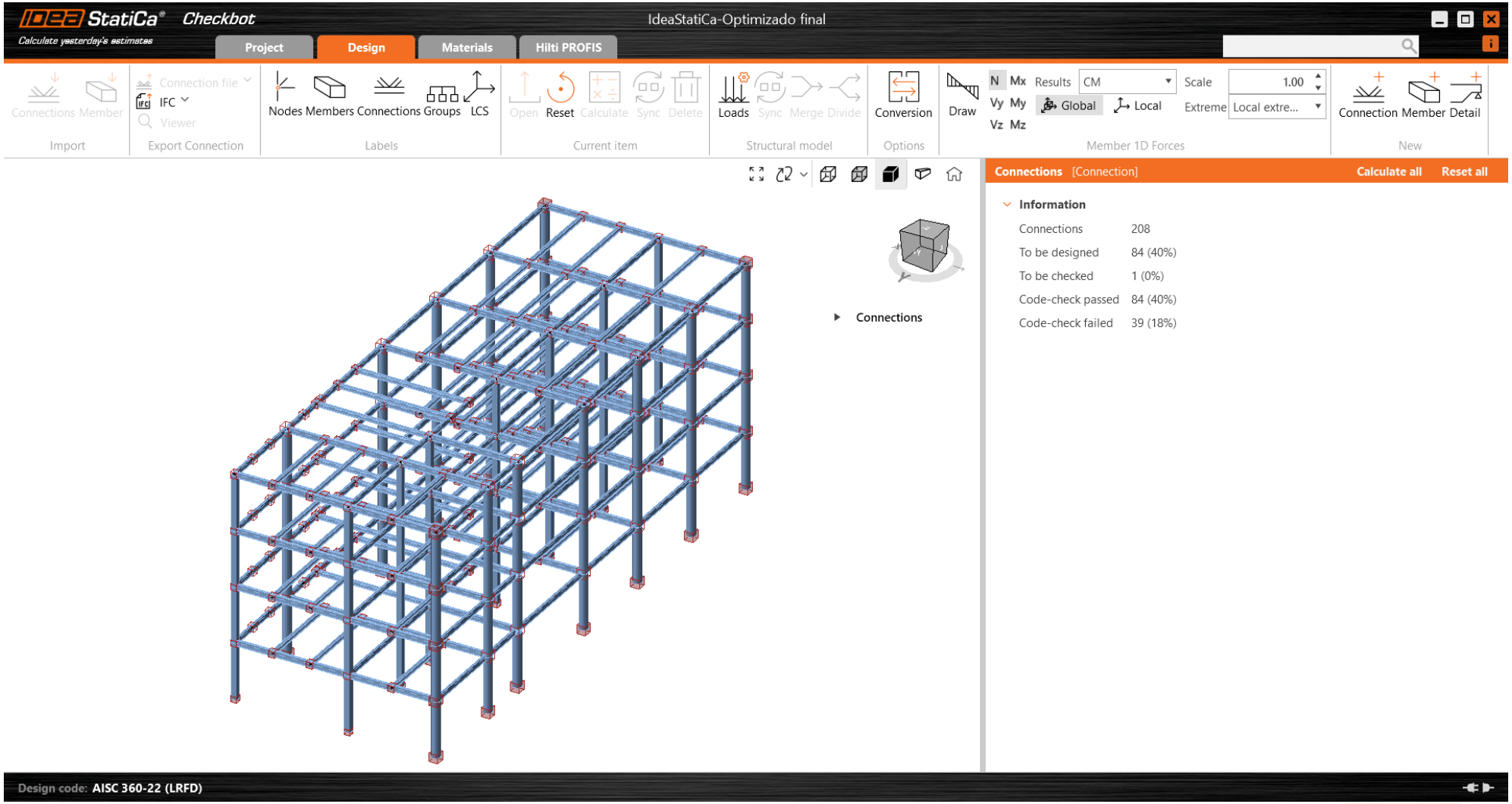
IDEA StatiCa CHECKBOT



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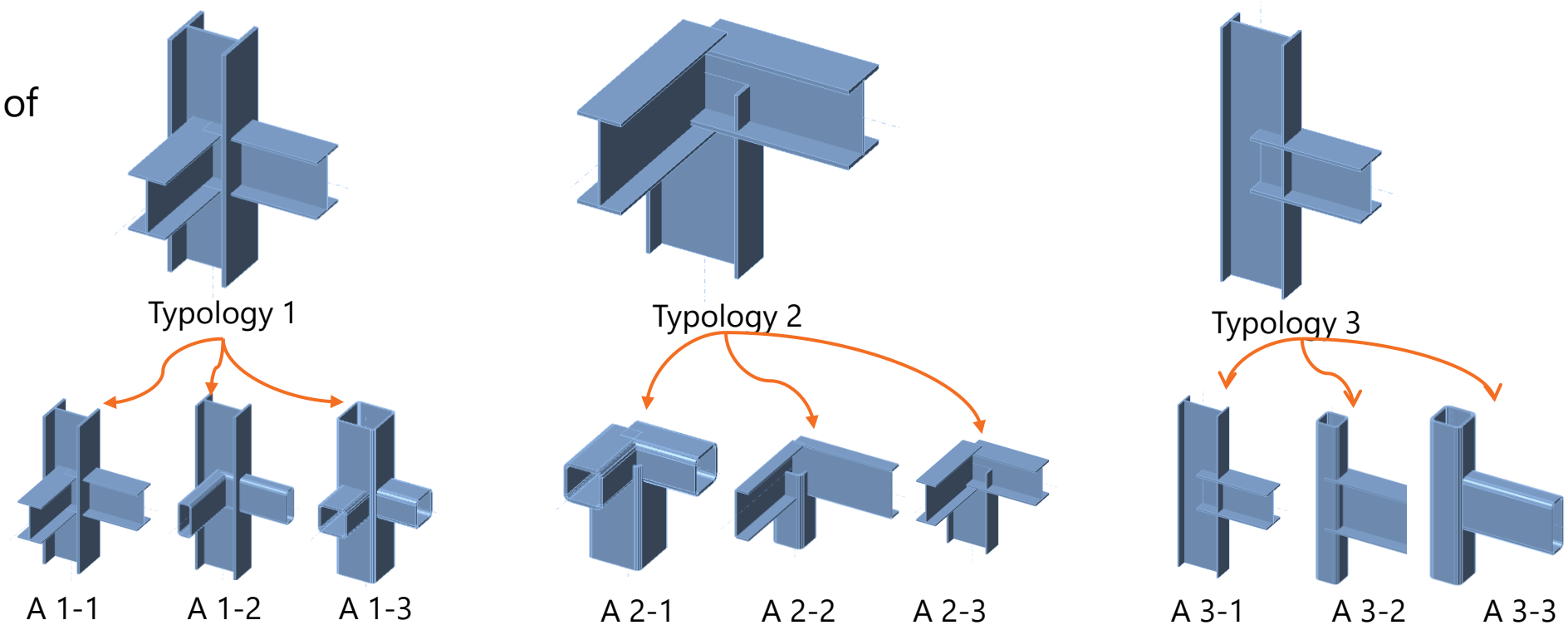
CHECKBOT Dynamic Grouping

Typology : Number of members and orientation

Arrangements: Cross section



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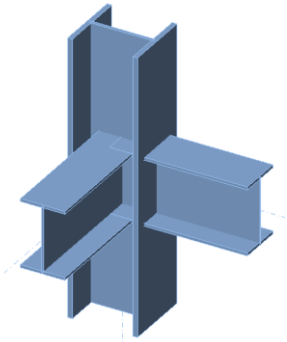
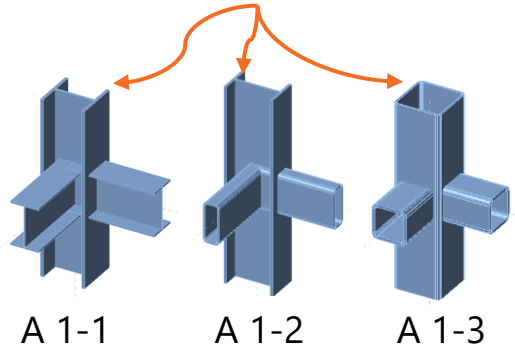
CHECKBOT Dynamic Grouping

Typology : Number of members and orientation

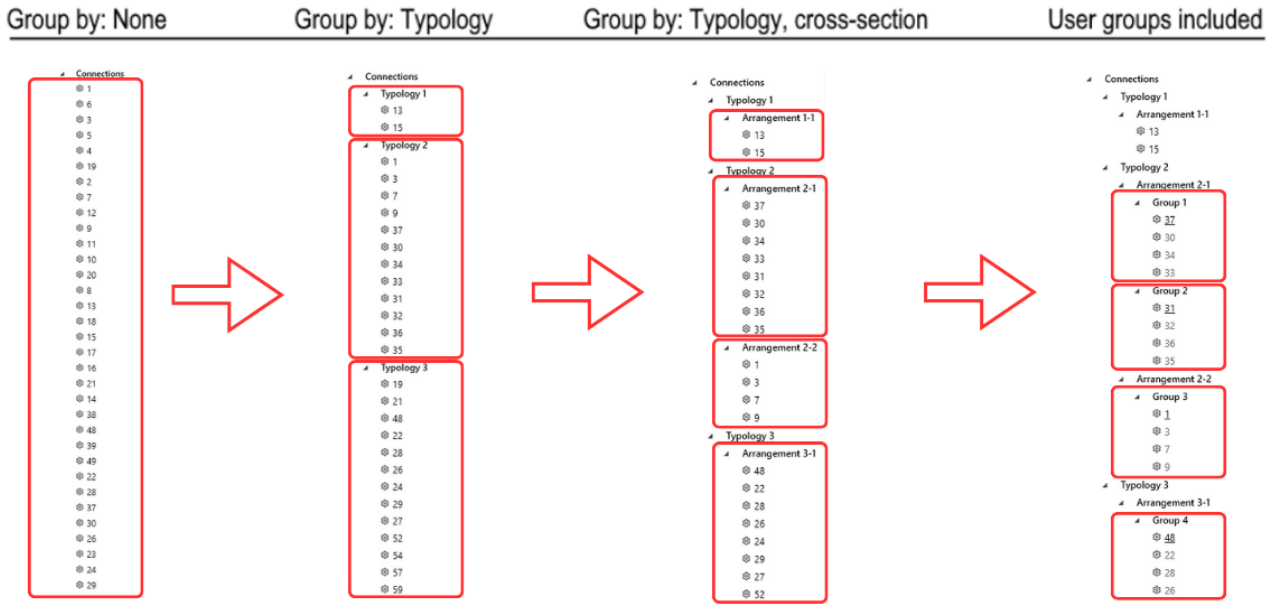


Typology 1

Arrangements: Cross section



A 1-1 A 1-2 A 1-3



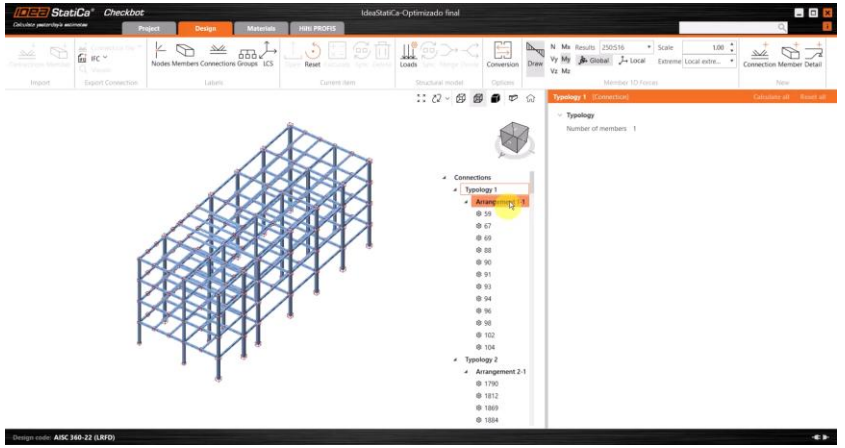
CHECKBOT USER GROUPS

User define the **groups** from arrangements

Reference connection is set up for each group

Design reference connection

Calculate all: Connection is copied to all the group items and analyze



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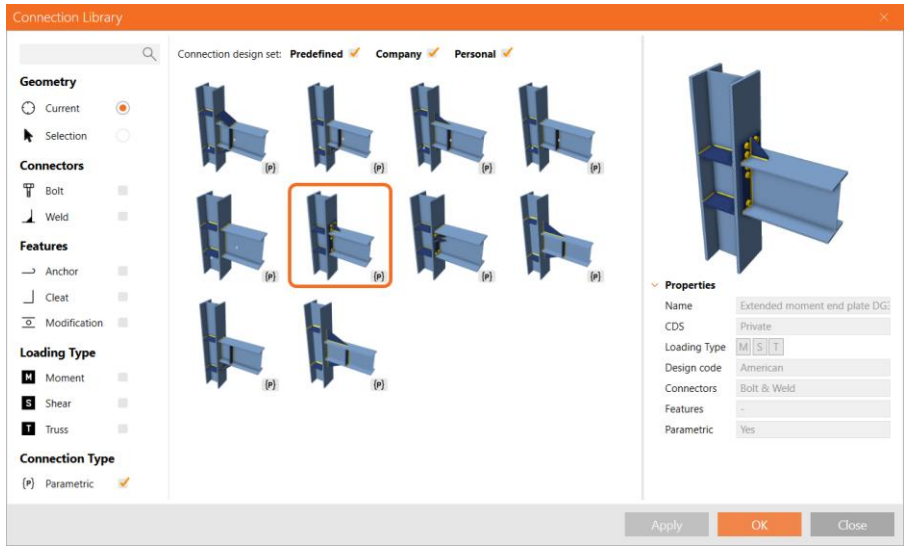
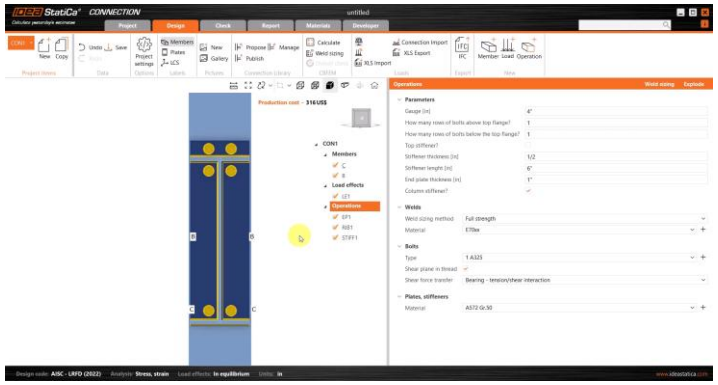
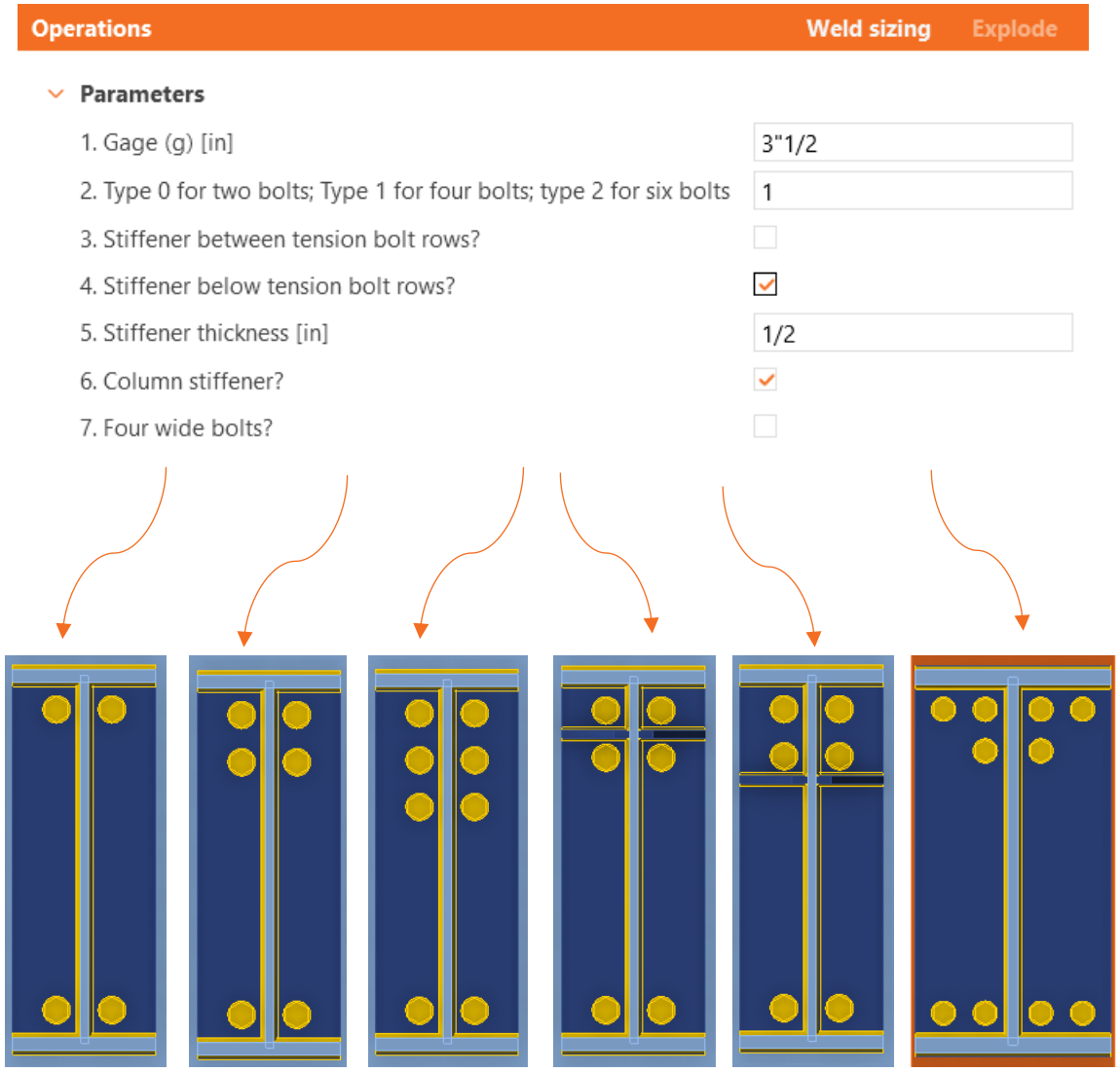
PARAMETRIC TEMPLATES







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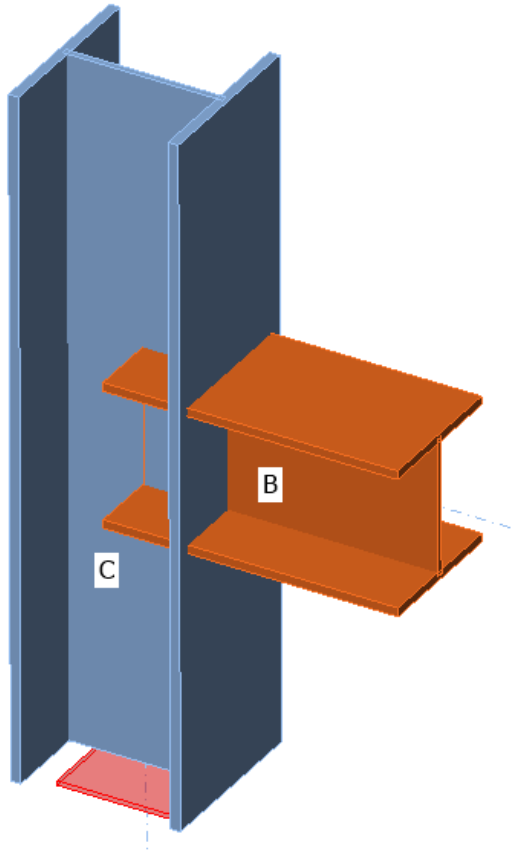
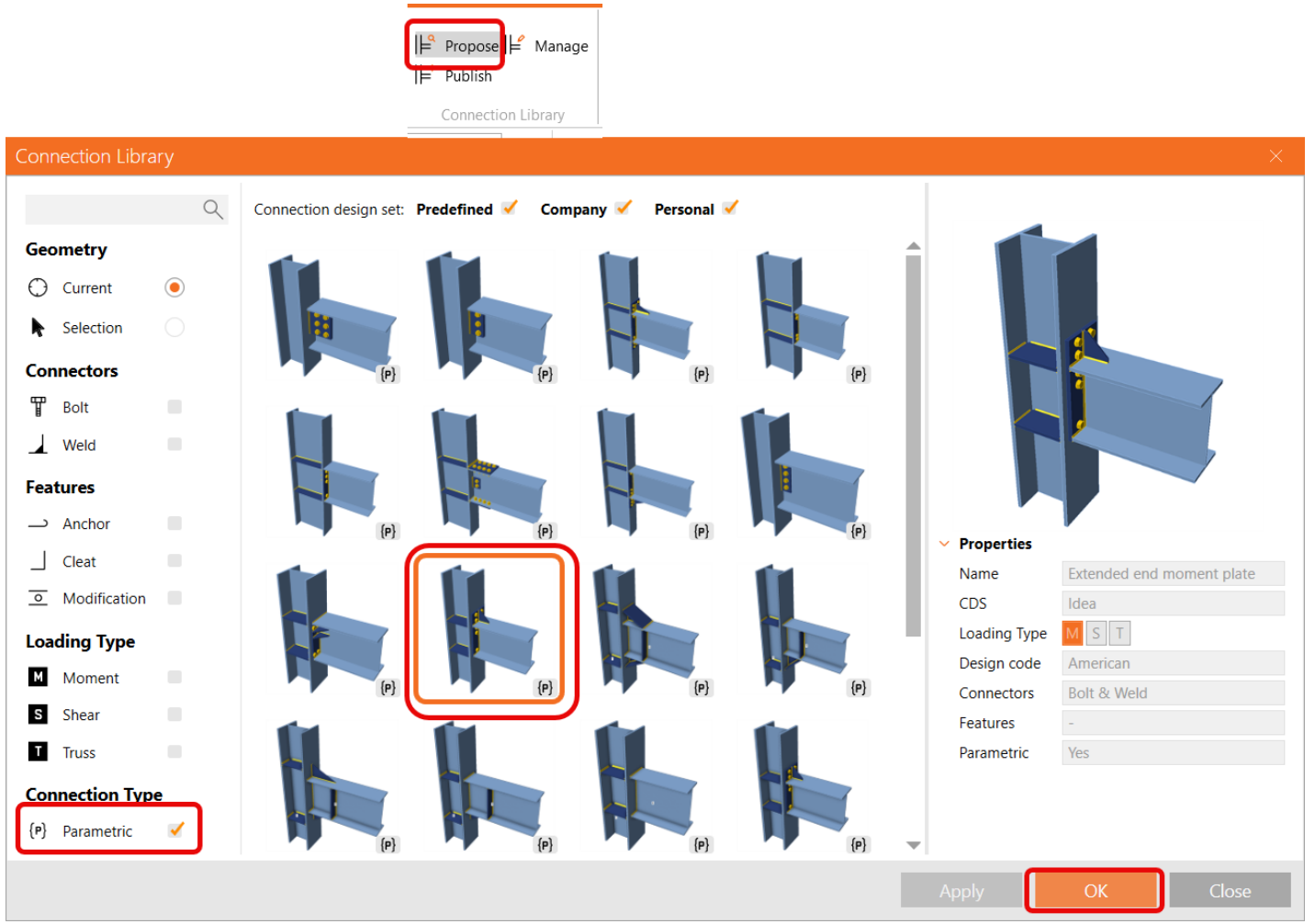
PARAMETRIC TEMPLATES – How to use them?

1. Set up a blank geometry



PARAMETRIC TEMPLATES – How to use them?

2. Click Propose
3. Select Parametric filter
4. Select the template
5. Click OK



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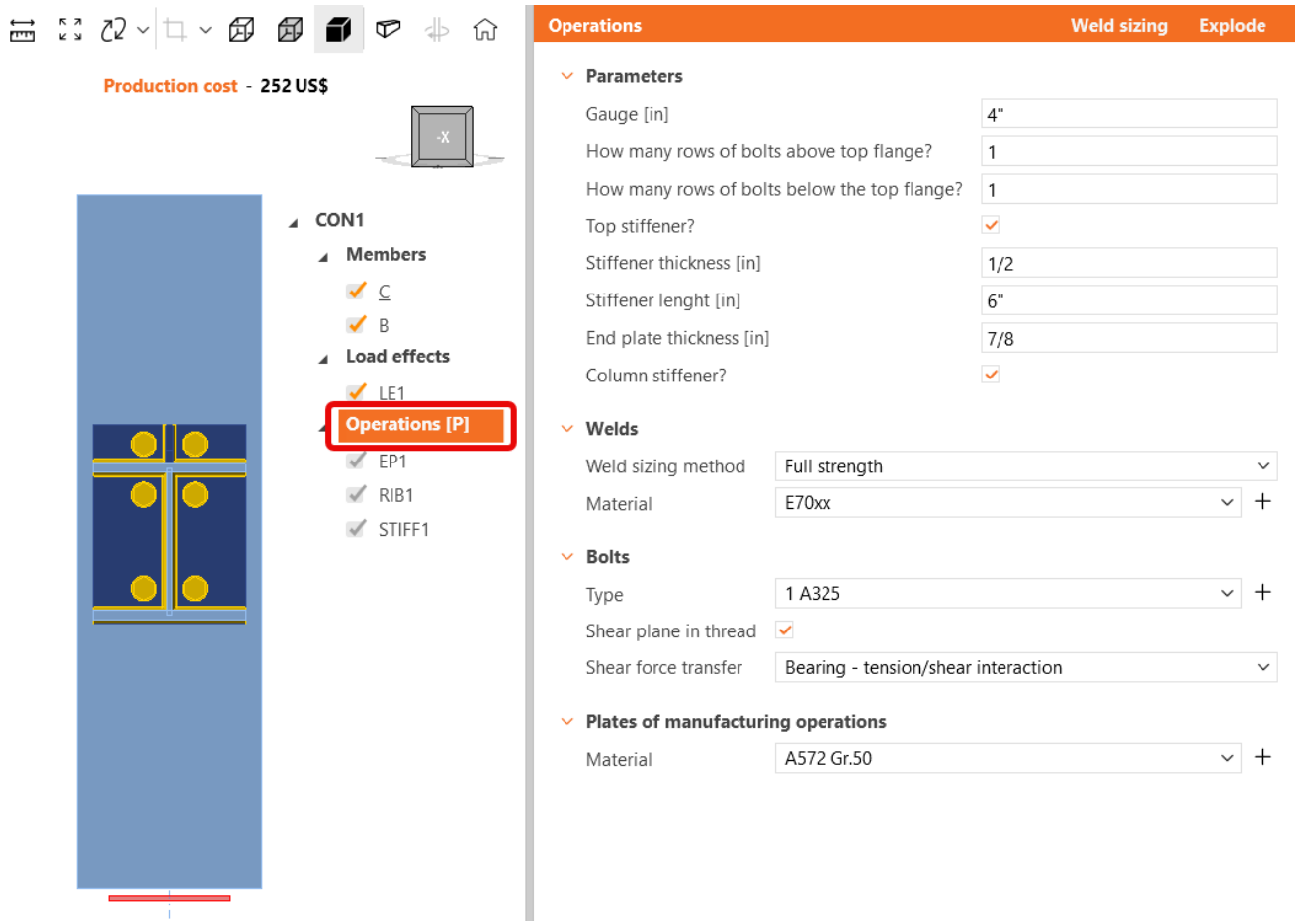
PARAMETRIC TEMPLATES – How to use them?

6. Select Operations line
7. Input Parameters

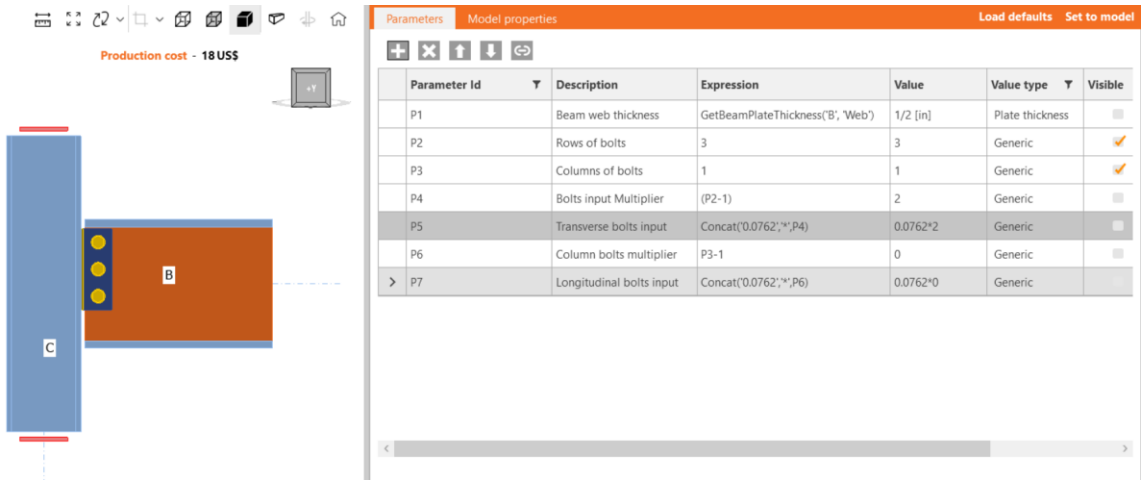


PARAMETRIC TEMPLATES – How to build them?

Quick example: **Shear tab** template

- Shear tab thickness= Beam web thickness
- User input: # Bolt rows
- User input: # Bolt columns
- Default values:
- Top offset= 1in
- Gap= 0.5 in
- Bolts spacing = 3 in= 0.0762 meters

Tutorial: Parametric design in IDEA StatiCa Connection - Flush moment end plate connections



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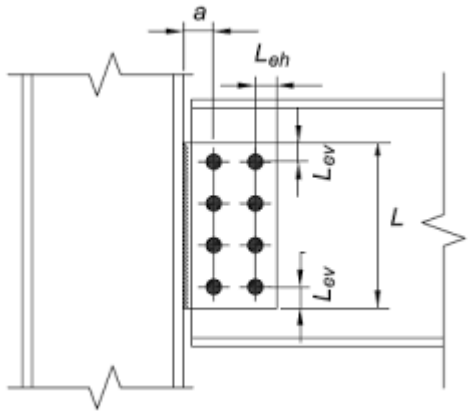
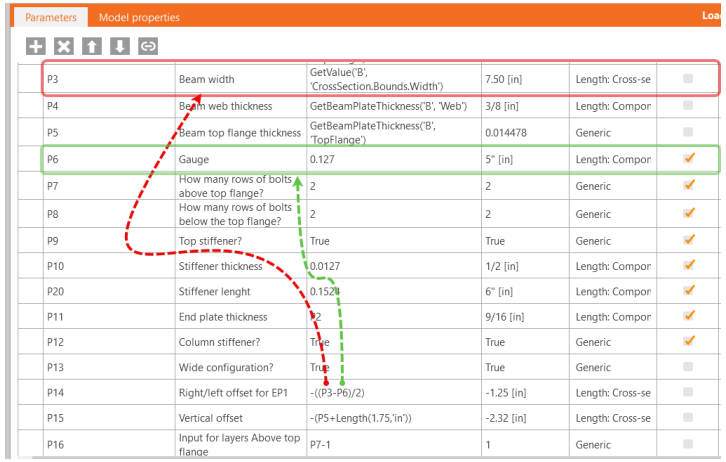
WHY TO BUILD PARAMETRIC TEMPLATES?

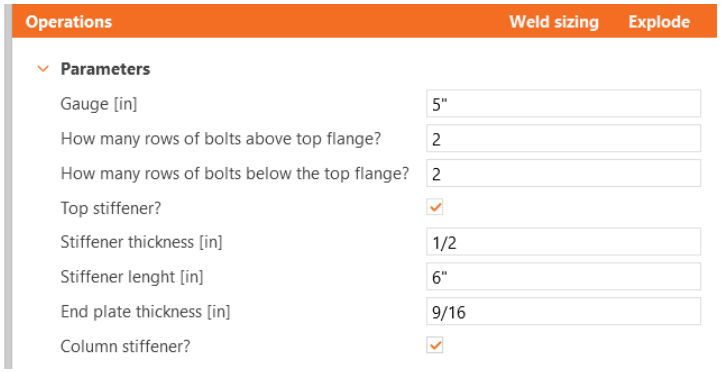


Custom company connections

Common company details



Smart templates



Avoid learning curve for simple connections

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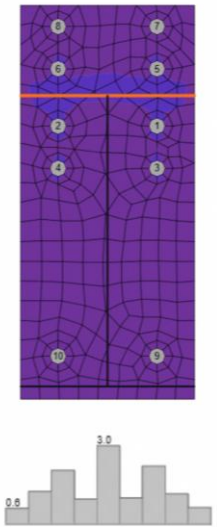
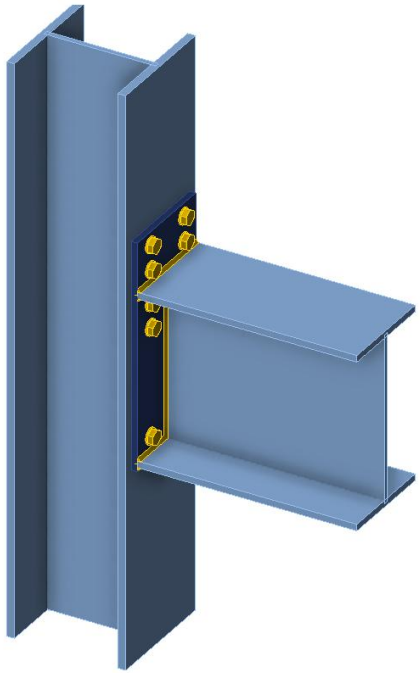
WELD CAPACITY ESTIMATION (UT_C) AISC

- Insight to low weld load levels
- Capacity of entire weld length
- Machine learning estimation

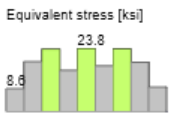




1

Check of welds for extreme load effect

		Status	Item	Edge	Xu	t_w [in]	w [in]	L [in]	L_c [in]	Loads	F_n [kip]	ϕRn [kip]	Ut [%]	Ut_c [%]	Detailing
	+	✓			E70xx	◢ 1/4 ◣	◢ 3/8 ◣	1'-0"1/4	1"3/8	LE1	12.96	17.07	75.9	52.1	✓
›	+	✓	EP1	B-tfl 1	E70xx	◢ 1/4 ◣	◢ 3/8 ◣	1'-0"1/4	1"3/8	LE1	12.90	17.07	75.6	50.6	✓
	+	✓	EP1	B-bfl 1	E70xx	◢ 1/4 ◣	◢ 3/8 ◣	1'-0"1/4	1"3/8	LE1	12.86	17.06	75.4	57.5	✓
	+	✓			E70xx	◢ 1/4 ◣	◢ 5/16 ◣	1'-8"9/16	1"3/8	LE1	9.68	13.98	69.2	37.0	✓
	+	✓	EP1	B-w 1	E70xx	◢ 1/4 ◣	◢ 5/16 ◣	1'-8"9/16	1"3/8	LE1	9.32	13.99	66.6	35.3	✓
	+	✓			E70xx	◢ 1/4 ◣	◢ 3/8 ◣	1'-0"1/4	1"3/8	LE1	8.05	16.63	48.4	27.7	✓

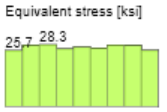


Utilization Check - 75.6%
Weld Capacity Estimation - 50.6%

2

Check of welds for extreme load effect

		Status	Item	Edge	Xu	t_w [in]	w [in]	L [in]	L_c [in]	Loads	F_n [kip]	ϕRn [kip]	Ut [%]	Ut_c [%]	Detailing
	+	✓			E70xx	◢ 1/4 ◣	◢ 3/8 ◣	1'-0"1/4	1"3/8	LE1	16.83	17.07	98.6	98.6	✓
›	+	✓	EP1	B-tfl 1	E70xx	◢ 1/4 ◣	◢ 3/8 ◣	1'-0"1/4	1"3/8	LE1	15.30	17.01	90.0	90.0	✓
	+	✓	EP1	B-bfl 1	E70xx	◢ 1/4 ◣	◢ 3/8 ◣	1'-0"1/4	1"3/8	LE1	15.16	17.07	88.8	87.2	✓
	+	✓	EP1	B-w 1	E70xx	◢ 1/4 ◣	◢ 5/16 ◣	1'-8"9/16	1"3/8	LE1	12.53	14.27	87.8	85.9	✓
	+	✓			E70xx	◢ 1/4 ◣	◢ 5/16 ◣	1'-8"9/16	1"3/8	LE1	12.52	14.27	87.8	86.5	✓
	+	✓			E70xx	◢ 1/4 ◣	◢ 3/8 ◣	1'-0"1/4	1"3/8	LE1	13.56	17.07	79.4	70.2	✓



Utilization Check - 90%
Weld Capacity Estimation - 90%

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LIVE DEMO

- Measure tool
- Operations multi-select and multi-edit
- Project tab: multiple items in one file
- Default materials
- AISC Cross section database v16.0

IDEA StatiCa®

Calculate yesterday's estimates

Q&A

USEFUL LINKS

Dynamic grouping and batch design process

Parametric templates

Balance Safety and Cost in Weld Design | IDEA StatiCa

24.1 Release notes