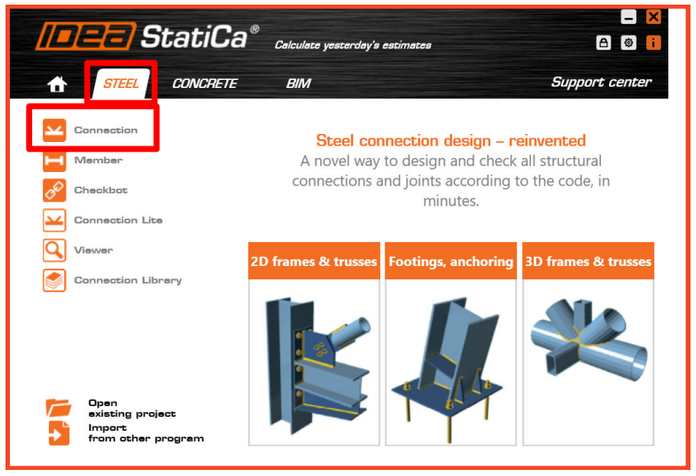
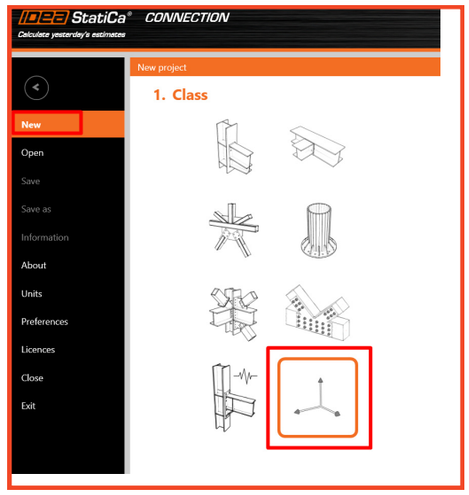
Evaluation of connection in two-story X-brace configuration of Ordinary Concentrically Braced Frame (OCBF) - CBFEM

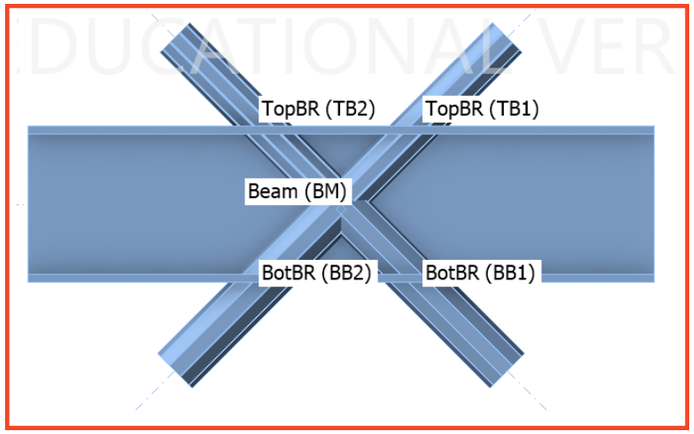
1. Open **IDEA StatiCa Connection**



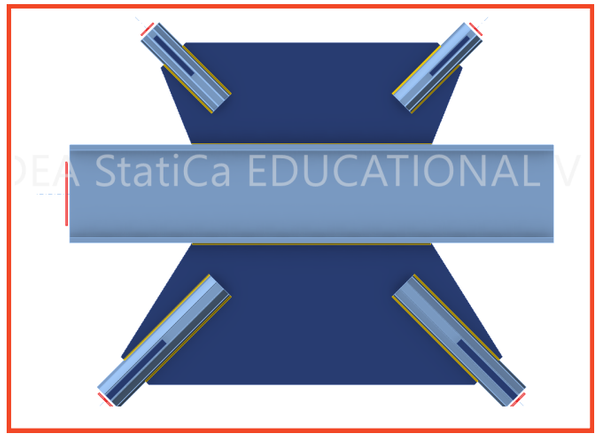
2. Select **AISC 360-16 (LRFD)** as design code in parameters.
Create New Model



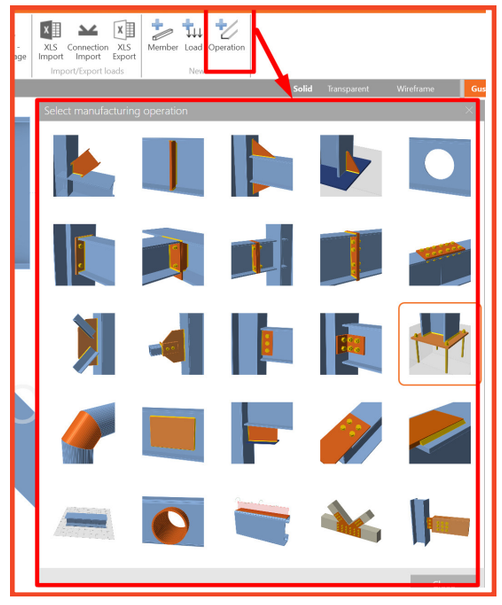
3. **Define Members** - Beam and Brace for the given size and material properties as per design



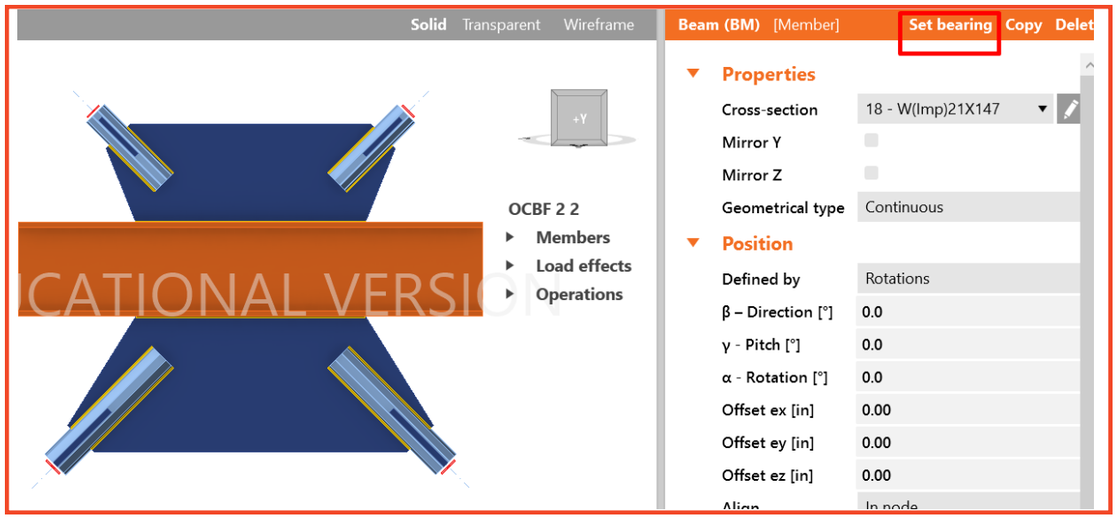
4. **Define Plates** - Gusset Plate and reinforcing Plates for given / trial thickness and material properties



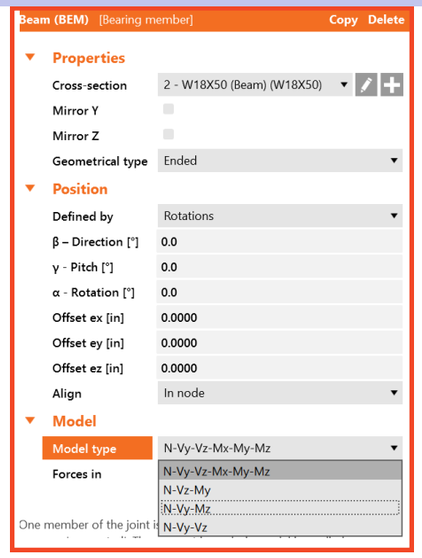
5. **Connect the members and plates** using suitable operations in CBFEM for connection - Welds



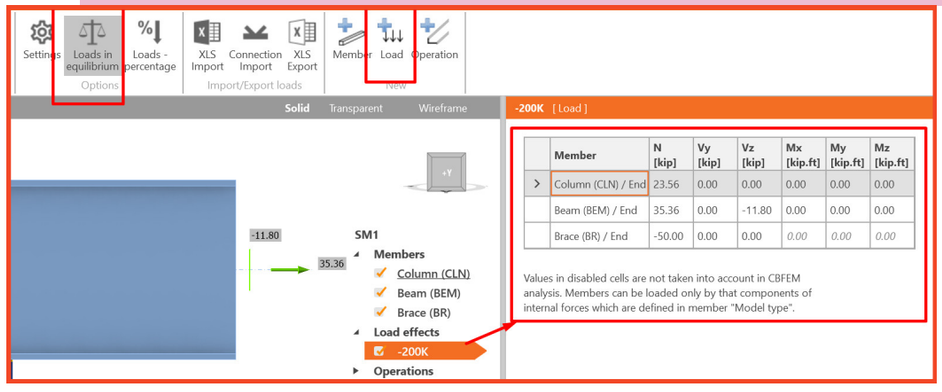
6. Assign the beam as **Bearing Member**



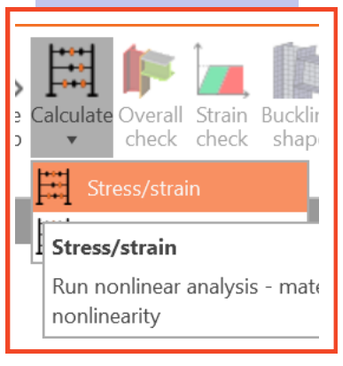
7. Assign **appropriate model types** to beam and brace members, such that forces are in node
[N-Vy-Vz-Mx-My-Mz to beam]
[N-Vy-Vz to brace]



8. Assign the **design loads** to the members and balance the forces such that " **loads in equilibrium**" is followed in CBFEM
Use **stress-strain method** in CBFEM for **OCBF**



9. **Run Analysis** of connection in IDEA StatiCa



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Note -The required strengths of beam and their connections are to use the **overstrength seismic loads** are as given in **AISC Seismic Provision Section F1.5c**