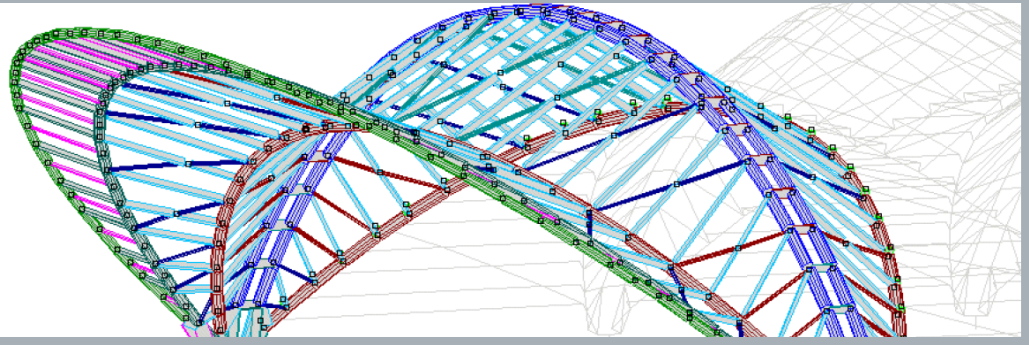


**Bentley**  
Advancing Infrastructure

**CONNECT Edition**



## Microstran

Leading-edge Software for Structural Engineers

Microstran is a powerful general purpose structural analysis package with built-in steel member and connection design. Microstran features powerful modeling commands, a number of commonly used analysis methods, exceptionally fast solvers, and interoperability with a number of other engineering file formats.

### The CONNECT Edition

The SELECT® CONNECT Edition includes SELECT CONNECT services, new Azure-based services that provide comprehensive **learning, mobility, and collaboration** benefits to every Bentley application subscriber. *Adaptive Learning Services* helps users master use of Bentley applications through CONNECT Advisor, a new in-application service that provides contextual and personalized learning. *Personal Mobility Services* provides unlimited access to Bentley apps, ensuring users have access to the right project information when and where they need it. *ProjectWise® Connection Services* allow users to securely share application and project information, to manage and resolve issues, and to create, send, and receive transmittals, submittals, and RFIs.

### Modeling Features

Microstran offers a myriad of ways to efficiently model a structure. A host of time-saving modeling commands within the graphic interface help the user rapidly construct the Microstran model. Alternatively, using the standard structure wizard users can quickly create common structures such as portal frames, grillages, 3D frames, and continuous beams. Microstran can also import 3D CAD files to be used as the basis for creating models. Users can also create and modify the structure using the tabular input window within Microstran.

### Analysis Features

Microstran showcases a number of common analysis methods including linear and non-linear static analysis, elastic critical load, modes of vibration, and response spectrum. Automatic profile optimization facilitates exceptionally fast analysis. Special nonlinear elements including tension-only and compression-only members, gap and fuse members, and catenary cable elements provide flexibility in the types of structures that can be modeled. Microstran also enables other important analysis considerations including rigid member offsets, temperature effects, prescribed displacements, semi-rigid connections, and moving loads.

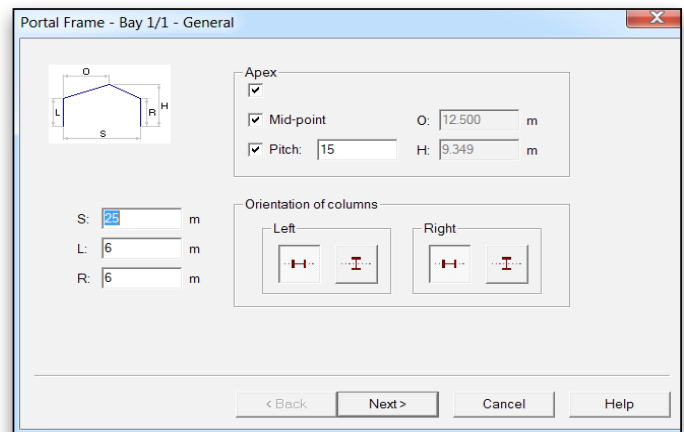
### Integrated Steel Member and Connection Design

Microstran offers design of members to a number of steel design codes including AS 3990, AS 4100, NZS 3404, AS/NZS 4600, BS 5950, AISC ASD Ed. 9, and SSCJ/AIJ. Microstran performs design checks for beams, columns, and braces, according

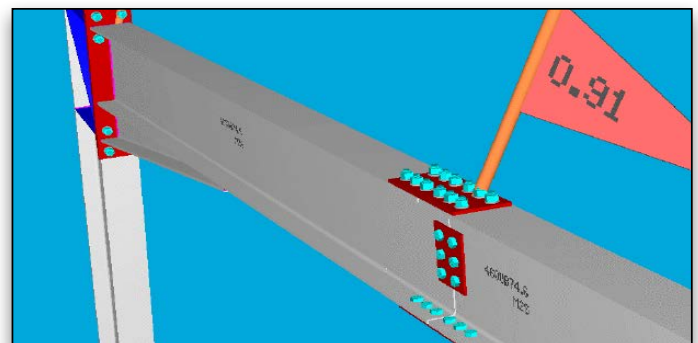
to the selected design code. Steel connection design is an extension of the steel member design option. After selecting the connection type at any location, design data and actions are automatically transferred to a new window where the user can interactively design the connection. Many connection types are available, including shear and moment connections, base plates, and hollow section truss connections.

### Section Library Manager

The Section Library Manager helps organize section data, including adding new and revising existing sections. Sections from different sources can be moved between different libraries. The properties of any section in the destination library can be viewed, re-computed, or checked.



Modeling wizard for common types of structures.



Integrated steel connection design showing connection geometry and status.

## System Requirements

### Processor

Intel Pentium or AMD processor  
2.0 GHz or greater

### Operating System

Windows XP or later

### System memory

Minimum of 512 MB of RAM,  
2 GB recommended

### Disk Space

Minimum of 500MB  
free space required

### Display

Graphics card and monitor with  
1280x1024 resolution, 256 color display  
(16-bit high color recommended)

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### Contact Bentley

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Outside the US +1 610-458-5000

### Global Office Listings

[www.bentley.com/contact](http://www.bentley.com/contact)

## Microstran At-A-Glance

### Modeling

- Model input:
  - » Model by graphic interface, standard structure wizard, or text input
  - » Manipulate models by import/export of Microsoft Excel Files
  - » Import 3D CAD files
  - » Direct export to STAAD.Pro
- Modeling capabilities:
  - » Section input by library, shape, or property values
  - » Spring supports
  - » Member releases
  - » 3D member offsets
  - » Semi-rigid connections with axial springs
  - » Tension-only and compression-only members
  - » Catenary cable element
  - » Node extrusion during copying
  - » Stretch, curve, arc, and helix commands
  - » Member orientation by reference node or axis

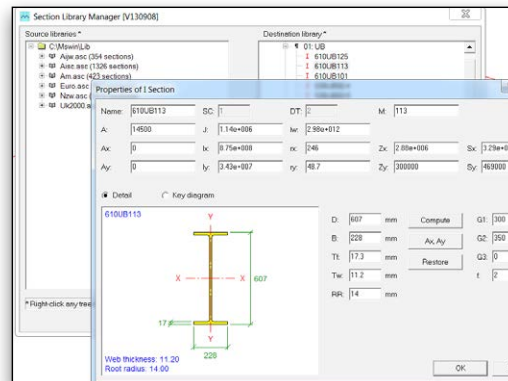
### Analysis

- Comprehensive consistency check
- Automatic profile optimization

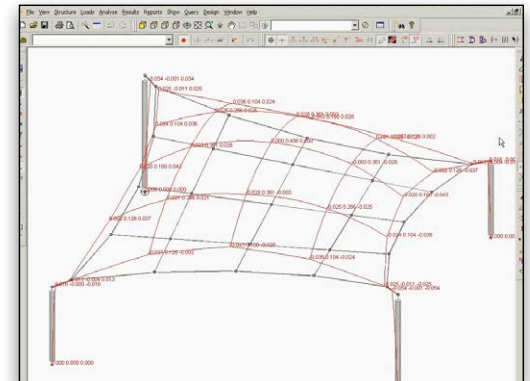
- Linear and non-linear static analysis
- Elastic critical load analysis
- Modes of vibration and response spectrum
- Master-slave constraints
- Gap and fuse members
- Moving load generator
- Temperature loading
- Prescribed displacements
- Export analysis results to excel

### Design

- Design of steel members to the following design standards:
  - » AS 3990
  - » AS 4100
  - » NZS 3404
  - » AS/NZS 4600
  - » BS 5950
  - » AISC ASD Ed. 9
  - » SSCJ/AIJ
- Beam, column, and brace design
- Support for both auto-design and design-check methods
- Design checks for cold-formed sections
- Integrated steel connection design



*The Section Library Manager allows users to create and review custom sections.*



*Shade catenary cable element subjected to wind uplift.*