



# RAM<sup>®</sup> Connection

Everything You Need for Steel Connection Design

RAM Connection can be used stand alone or fully integrated with RAM Structural System, RAM Elements, and STAAD.Pro<sup>®</sup> for steel connection design. To check a specific connection, design a single connection for multiple joints, or optimize each connection in your structure, RAM Connection gets you there quicker than ever before.

## **AUTOMATED CONNECTION DESIGN**

Designing, checking, and optimizing shear, moment, gusset, splice, bracket, base plate, and truss connections, according to AISC (ASD or LRFD), EN 1993, BS 5950, IS 800, GB 50017, AS4100, and NZS 3404 has never been this automated. Designers can assign connections directly to the finite element model and have RAM Connection automatically consider member geometric and material properties – and analytical results – to choose the desired connection. The engineer has unlimited flexibility to check a specific connection or optimize all connections individually or in groups.

## **INTEGRATED CONNECTION DESIGN**

RAM Connection is the first fully integrated steel connection design and optimization application in the industry. RAM Connection works as a stand-alone program or can be integrated with RAM Elements, STAAD.Pro, and RAM Structural System.

## **PROVIDES UNLIMITED FLEXIBILITY**

Your own office standards, rules of thumb, or connection expertise can be brought together into the connection designs because RAM Connection allows you to customize a vast part of the design. You can also choose from our large database of predefined connections to meet your design needs. RAM Connection goes even further by providing reports with explicit equations and references to the design standard.

## **A MYRIAD OF CONNECTIONS AT YOUR FINGERTIPS**

Whether you are designing a shear connection (shear tab, clip angle, end plate), a moment connection (flange plates, directly welded flanges), a combined connection (extended end plate), a gusset connection for braces, or a truss connection, RAM Connection is all you need. All design checks are done for you immediately so comparing different connection options for a particular problem is easy.

## **CUTTING-EDGE GRAPHICS**

RAM Connection also raises the bar with its breakthrough graphics. This feature allows accurate 3D views of fit-up and clearance to ensure your structure will work and reduce on-site connection issues.

## **DETAILS PRODUCED AUTOMATICALLY**

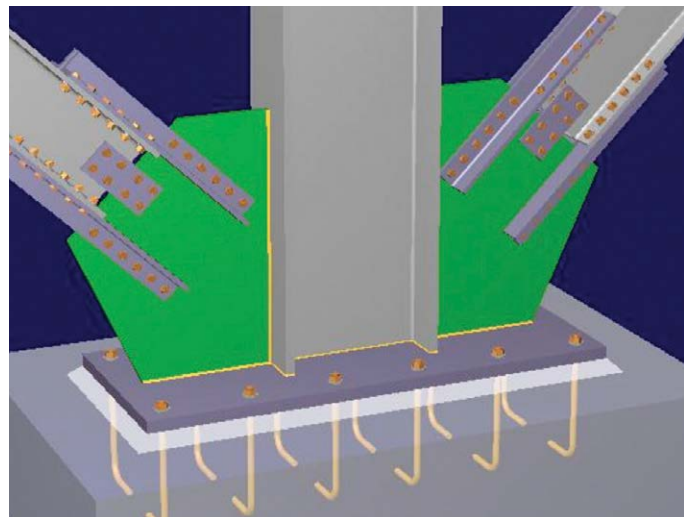
RAM Connection saves you time and increases your accuracy by generating your details directly from your designs through a DXF output file.

## **EASILY HANDLES CHANGES**

RAM Connection can easily handle changes that occur during the lifecycle of your project. RAM Connection saves you time even when making sweeping changes to your designs.

## **SEISMIC DESIGN INCLUDED**

To address ever-changing and time-consuming code requirements, RAM Connection includes AISC seismic provision checks in your designs.



*Base Plate with Gussets*

## SYSTEM REQUIREMENTS

**MINIMUM:** Windows 8.1 x64 or higher. 2 GB RAM, 4 GB recommended.

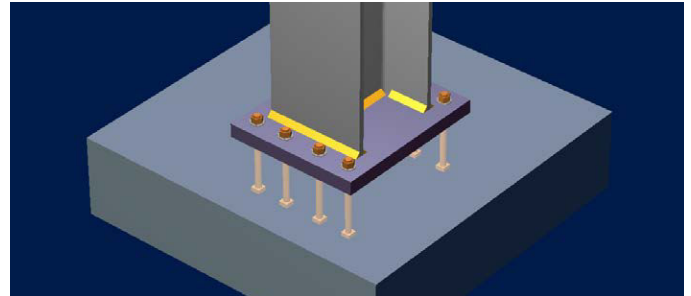
**DISPLAY:** OpenGL compatibility graphics card with at least 512 MB in video memory.

**RECOMMENDED:** Multiple processor core (x64).

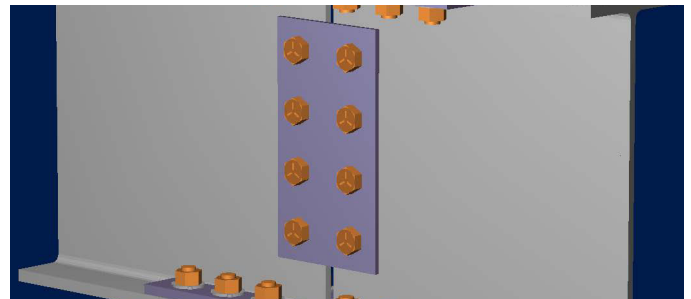
# RAM Connection At-A-Glance

## MODELING

- Use wide flange beams, wide flange, or HSS columns and virtually any steel section(s) for braces
- Beam-to-column connections (flange or web)
- Beam-to-girder connections
- Beam-to-beam connections
- Beam and column splices
- Brackets
- Base plate design including anchors
- Gusset plates for vertical and horizontal bracing connections
- HSS chords and branches truss connections
- Extensive, customizable database of connections provided
- Generate new connection templates using the program interface or using Microsoft Excel
- Control dozens of design parameters such as:
  - Plate dimensions
  - Welds (type, size, electrode series, length, etc.)
  - Bolts (size, material, N, X, slip critical, hole types, etc.)
  - Doublers and stiffeners dimensions
  - Top and bottom beam copes
  - Sloped and skewed connections



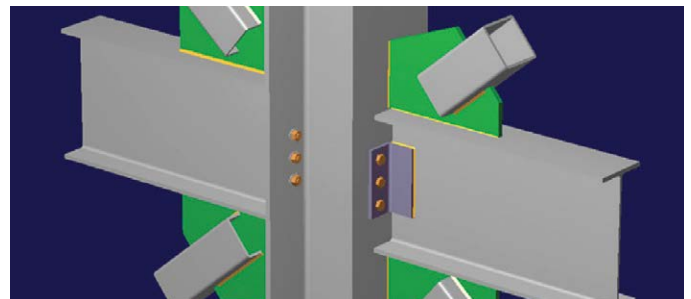
Base Plates



Beam Splices

## DESIGN

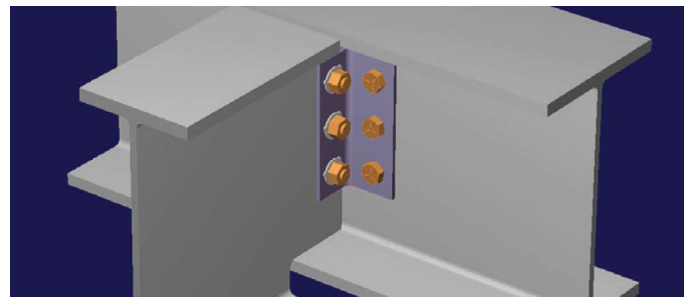
- Design per AISC 360-05-10 or 16 (ASD or LRFD)
- Design per AISC 341-05-10 or 16 seismic provisions
- Most AISC 358-05 & 10 prequalified moment connections included
- Anchor bolt design per ACI 318, EN 1992 (EC2), AS 4100, and NZS 3101
- Design per GB 50017-2003
- Design per IS 800:2007
- Design per BS 5950-1:2000
- Design per EN 1993-EC3
- Design per AS 4100-1998 or 2020
- Design per NZS 3404-1997
- CSA S16-14 or 19
- Verify existing connections
- Optimize connections with our advanced algorithms or from your own pre-selected list



Bracing Connections

## OUTPUT AND DOCUMENTATION

- Design/check one connection at a time or hundreds at once
- Output and documentation
- On-screen verification of connection results
- 3D realistic views
- 3D transparent views to avoid joint conflicts
- DXF drawing generation
- DXF export to CAD



Double-angle Connection