



Design Modules

General Frame designs two dimensional metal building frames. Built-up, tubular, mill M and W, rectangular tube and generic members can be designed. Frames may have up to 9 interior columns, unsymmetrical column spacing, offset peak, uneven base elevations, column base connections that are either pinned or fixed. General Frame includes integrated connection design (pinned or fixed at the base of columns, moment and pinned haunch, pinned at top of interior columns, moment at other locations). Frames can be designed with other connection types, but no integrated connection design or plotting would be available. General Frame with integrated connection can be licensed with or without plotting. The plotting would be mainframe shop drawings and cross-section plot. Input consists of a series of input screens. Joint coordinate input is not required. Input and output can be in imperial or metric units.

Card Image designs two dimensional structures with up to 100 members. Built-up, tubular, mill M and W, rectangular tube, and generic members are supported. This module can be used to design any two-dimensional structure, including beams and trusses. Input of joint coordinates is required. Input consists of a series of input screens. (Or the user can edit a text file directly.) Input and output can be in imperial or metric units. Card Image includes an analysis mode.

ColdgoPlus designs and analyzes purlins and girts. Section properties can be determined for C-sections, Z-sections, eave struts and hat sections. Simple span and axial load table options may be licensed. Input consists of a series of screens. Input and output can be in imperial or metric units.

Wind Bracing design is for the design of diagonal bracing members to resist wind and seismic forces applied to the endwalls of metal buildings. Input includes sidewall strut locations as well as façade elevations. Input consists of a series of screens. Input and output can be imperial or metric units.

Top Running Crane Runway Design provides the user with the capability to select efficient run-way beams for top running cranes. The selected runway beam can consist of (1) a mill channel compression flange, a flat plate web and tension flange, (2) a mill channel over the compression flange, a flat plate web, and a tension flange or (3) a mill channel in combination with a mill M&W section. Web stiffeners are at the option of the user. The program accepts a single crane or two cranes acting in the same bay. If two cranes are specified, they can be either equal or unequal. Design constraints of this program are:

- vertical deflection
- minimum flange width
- maximum flange width
- maximum stress ratio

Input consists of a series of screens. Input and output units are in Imperial or Metric units. Output includes forces that are applied to the supports, stress values, section properties, deflections, and all input information.

Connection Design program provides the ability to design 4-bolt or 8-bolt moment connection end plates based on the method described in Manual of Steel Construction - Allowable Stress Design (AISC) 9th edition Part 4 (pages 4 - 116). The program can handle up to twenty load sets. The input consists of a series of input screens. Input and output can be imperial or metric.

Cold-formed Mainframe designs frames of C-sections (single or double, back to back). It includes integrated connection design, which generates drawings of the flat connection plates. Frames can be symmetrical, nonsymmetrical gabled, or monoslope. Floorbeams and ceiling members as well as scissors truss rafters and frames for hip roofs are available. These frames are intended for small utility buildings with bay spacing of 8 to 12 feet. Input consists of a series of screens. Input and output are imperial.

PanelPlus determines panel diaphragm strength based on fastener type and location, panel configuration, the shape of the diaphragm and the location of the supports. A properties and allowables module is included. Input and output can be imperial or metric.