



JTB Steel

AutoCAD® Add-in Application by JTB World Inc.

USER'S GUIDE

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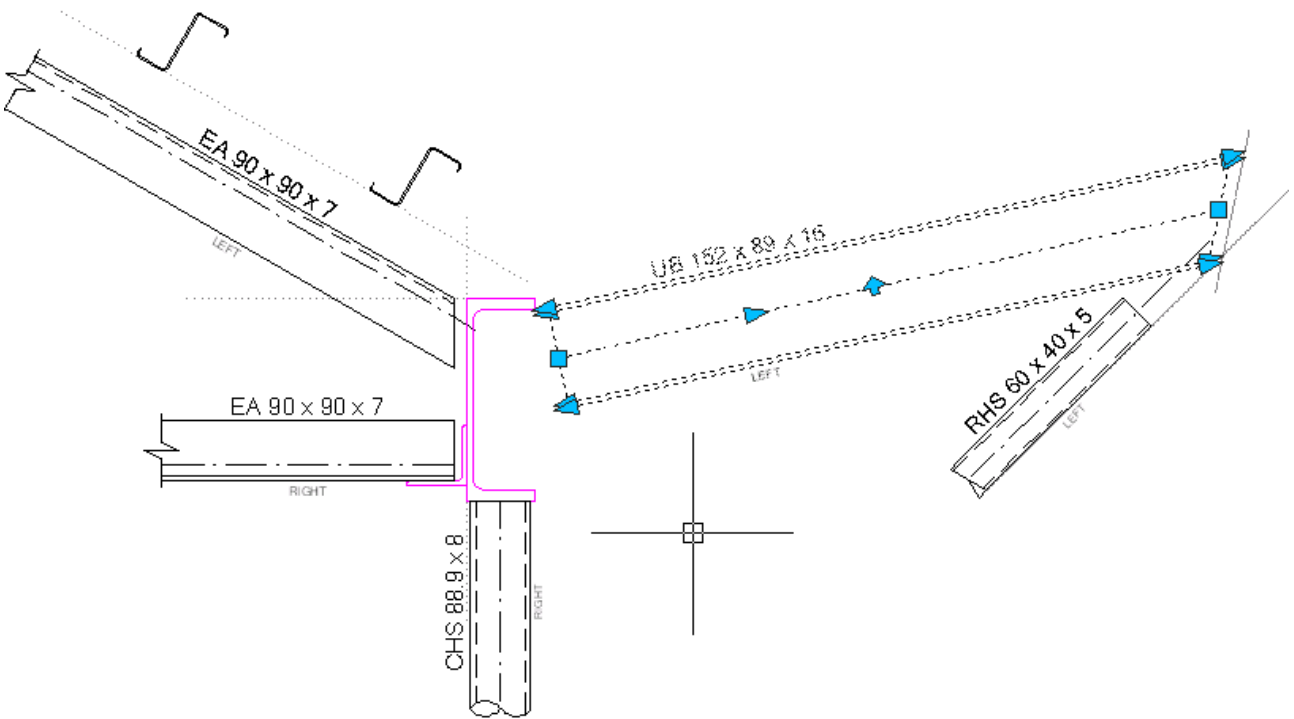
Chapter I: GENERAL

About

JTB Steel brings a world of steel sections and steel frames to your AutoCAD. You will find it is not only great at inserting steel members, but also powerful when editing them. All created drawing objects are either blocks or dynamic blocks. You can change sections of multiple objects all at once, or you can convert a line-work truss to a steel-framing truss just in few clicks. You can draw steel frame as stick-line at plan and elevation view, then you can turn it to an opaque frame with break lines in detailing view.

Less time for drawing, stretching, rotating and trimming. More time for designing. JTB Steel will not only speed up your drafting routines, but also make it interesting and enjoyable.

The below example was fully created using JTB Steel (this includes alignment, rotation etc):



Sample drawing created by JTB Steel objects and commands

Installation

System Requirements:

1. Windows[®] XP, Windows[®]7 or Windows[®] 8 and 8.1; 32-bit or 64-bit Operating System.
2. AutoCAD[®] version 2007 up to 2015.
3. About 12Mb on your drive where JTB Steel is to be installed.
4. Ideally in Win32 OS, AutoCAD[®] VBA should be installed – this gives better performance by enabled floating windows.

Install

1. Download the latest installer here: <https://jtbworld.com/JTB-Steel>
2. Close all running AutoCAD® sessions.
3. Start the installer. You'll be asked for User Account Control permission or Admin password.
4. Click Yes and follow on-screen instructions. Default installation folder is C:\Program Files\Autodesk\ApplicationPlugins\JTB Steel.bundle.



JTB Steel Utility ribbon

For AutoCAD version 2012 up to 2015, just open AutoCAD and ribbon will be shown under Plug-ins tabs. If they are not, please check APPAUTLOAD command and set the value to 14. Turn Plug-ins tab on if it is off. More trouble shooter information can be found at ...

For AutoCAD version from 2007 to 2011, APPAUTLOAD mechanism not yet implemented. Hence, JTB Steel will add its StartUp.lsp file to AutoCAD Startup Suite of all users.

After installation, JTB Steel will place a shortcut of JTB Steel.exe application on your Windows® desktop, and it will start JTB Steel.exe application.

JTB Steel.exe application helps you view and manage the Steel Section Library without opening AutoCAD®.

Uninstall

If you need to uninstall JTB Steel, you should use Uninstall shortcut from Windows Start Menu\JTB Steel or you can go to Control Panel\ Programs and Features\Uninstall or Change Programs\JTB Steel and click Uninstall button (Windows 7).

Note on Win64 issue: See Appendix, FAQ for details

Activate your license

JTB Steel trial license is limited to 30 minutes running time which restarts each time AutoCAD® is restarted. It is also limited to drawing file size of maximum 500 objects. Once the above limitations are reached, some features are disabled until the software is fully activated.

Click “Activate” button in JTB Steel window to open the Activation Form. Follow the on-screen instructions to request activation of JTB Steel on your computer. Detail information can be found on our website at: <https://JTBWorld.com/JTB-Steel>

Name conventions used in this manual

- **Steel Section (or Section)** : refers to member's cross-section shape, in the Database or in AutoCAD® as inserted block.
- **Steel Frame (or Frame)** : refers to a dynamic block of a member in side view (left, top, etc).
- **Steel Object**: refers to Steel Section or Steel Frame.
- **Database**: refer to defined Steel Sections saved as text file in JTB Steel library folder; or in your 'opening drawing' folder (local Database)
- **Command**: refer to a command text entered at AutoCAD® command line, or to an action button on a dialog window.

Getting Start

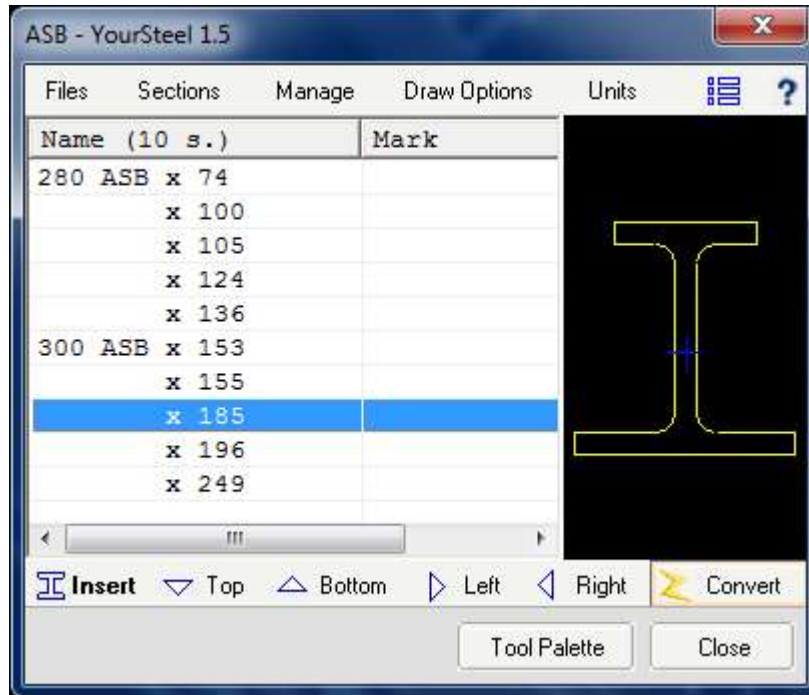
At first time running, a Quick Start window will show to help you select your sections database preference. You can reopen this window anytime by click to the Help button on Draw or Tool Palette.



JTB Steel Quick Start window

The main working flow of JTB Steel is as following:

1. Firstly, run “**JS**” command which brings up JTB Steel window:



Using commands on Draw Palette, you can:

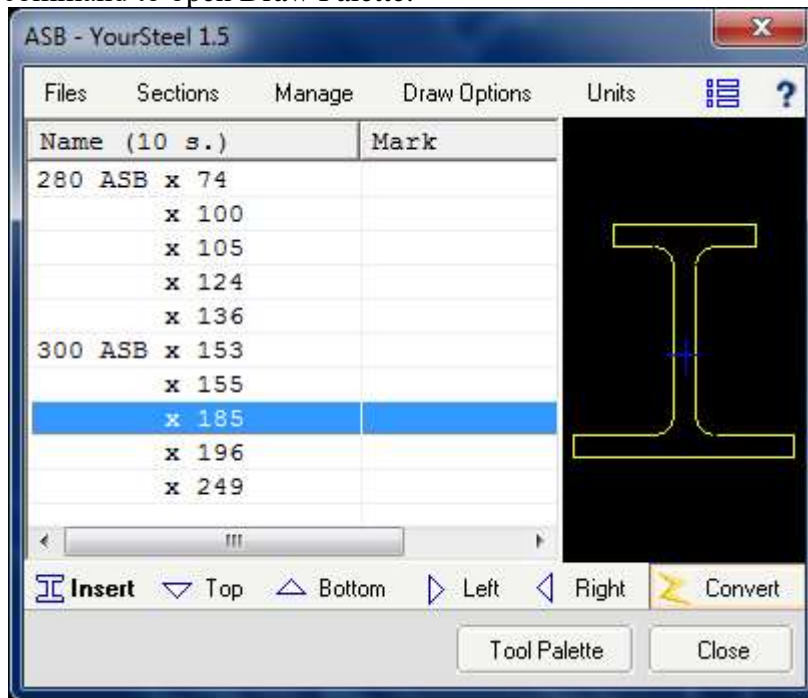
- insert new sections and draw new frames;
 - open Tool Palette to edit already inserted sections and frames;
 - access to Steel Sections Library (UK, EU, US and Australian sections are covered).
2. Use **ED** (JEdit) command to change inserted sections and frames.
 3. Use **JSC** (shortcut of JSTEELCHANGE), **JST** (shortcut of JSTEELTOOLS), **JMatch**, **JExplode**, **JOffsetMove** in combination with AutoCAD commands to create steel details.
 4. Use **UP** (JUpdate) command to adjust texts on Steel Frames to current dimension.

Chapter II: DRAW PALETTE

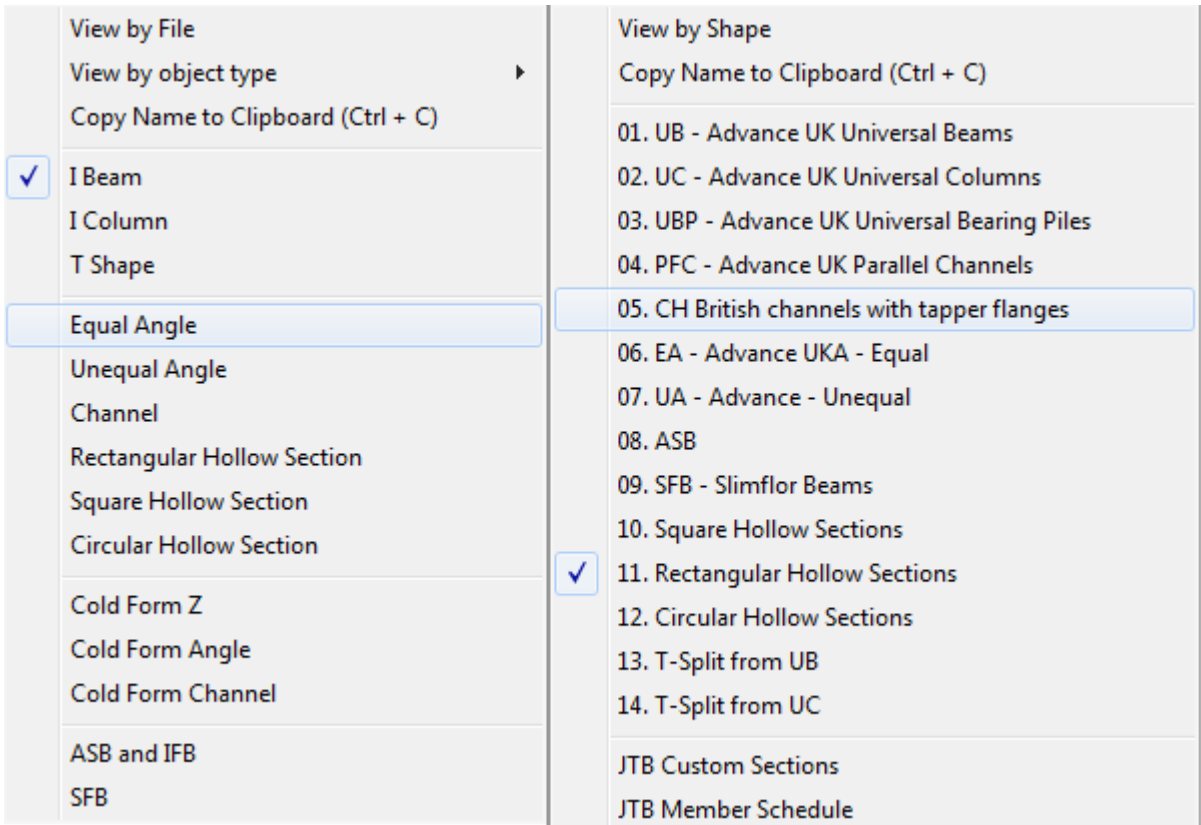
Draw Palette

1. Start

- Type in “JS” command to open Draw Palette:



- Press F1 anywhere to open immediate help page.
- Right click on the list view to bring up a selection window with various Steel Section categories. Two methods are used to categorize sections: “By Shape” and “By File”. See **8.Sections** for more information.
- Once in the Steel Sections list in the Draw Palette you can:
 - press Ctrl + C to copy the section’s name to clipboard;
 - double click, or press Space key, or press Enter key to run the command shown bold on the command row below;
 - press Esc key to close the palette.
 - click to Name or Mark column header to extend column
 - right click to the preview picture to choose Copy Picture to clipboard command.



Right click pop-up menu to select sections category

2. Insert command  **Insert**

Inserted Steel Sections and Steel Frames are always drawn to 1:1 scale, according to your current unit setting.

For example, if a PFC is 200mm deep then once inserted it would appear as 200 units where drawing units are set to millimeters or 7.87 units where drawing units are set to inches.

In the Draw Palette click “Units” button to see what units are used in your current drawing.

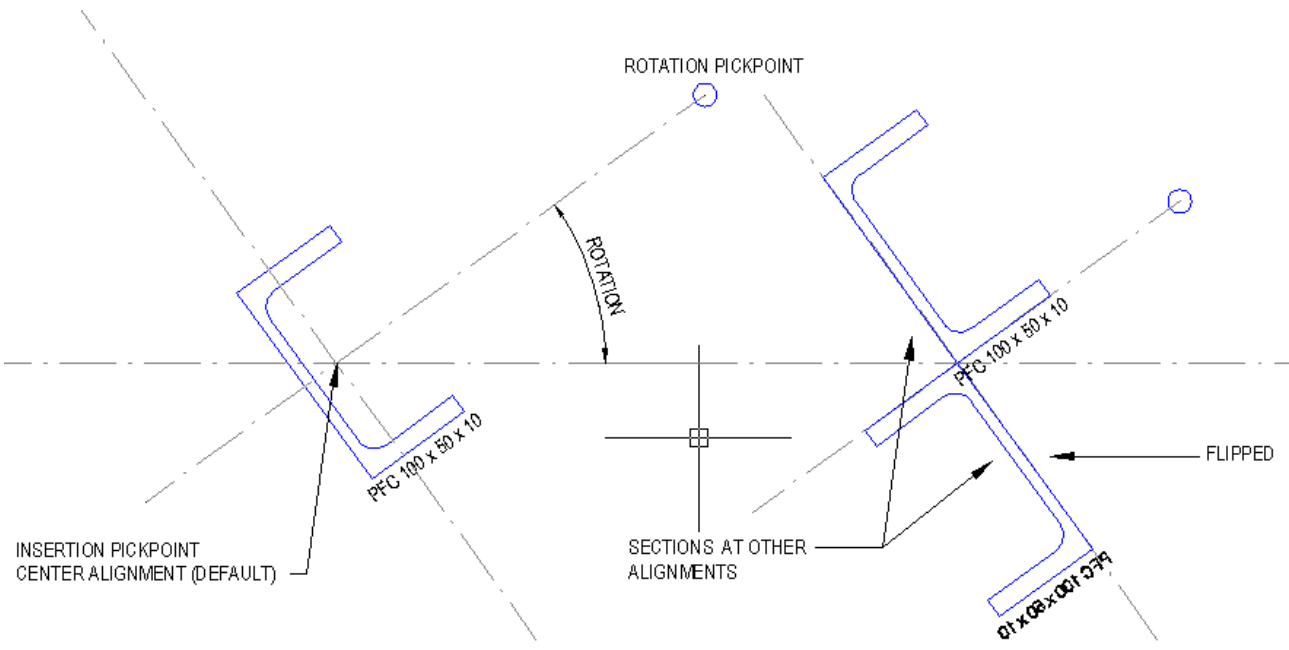
Once selected Steel Section is inserted you have four options to align it:

[Undo\Rotate\Flip\Align]

- Type U to Undo the action;
- Type R to rotate the section (you will be prompted to specify rotation angle);
- Type F to flip (mirror) the Steel Section;
- Type A to select other alignment.

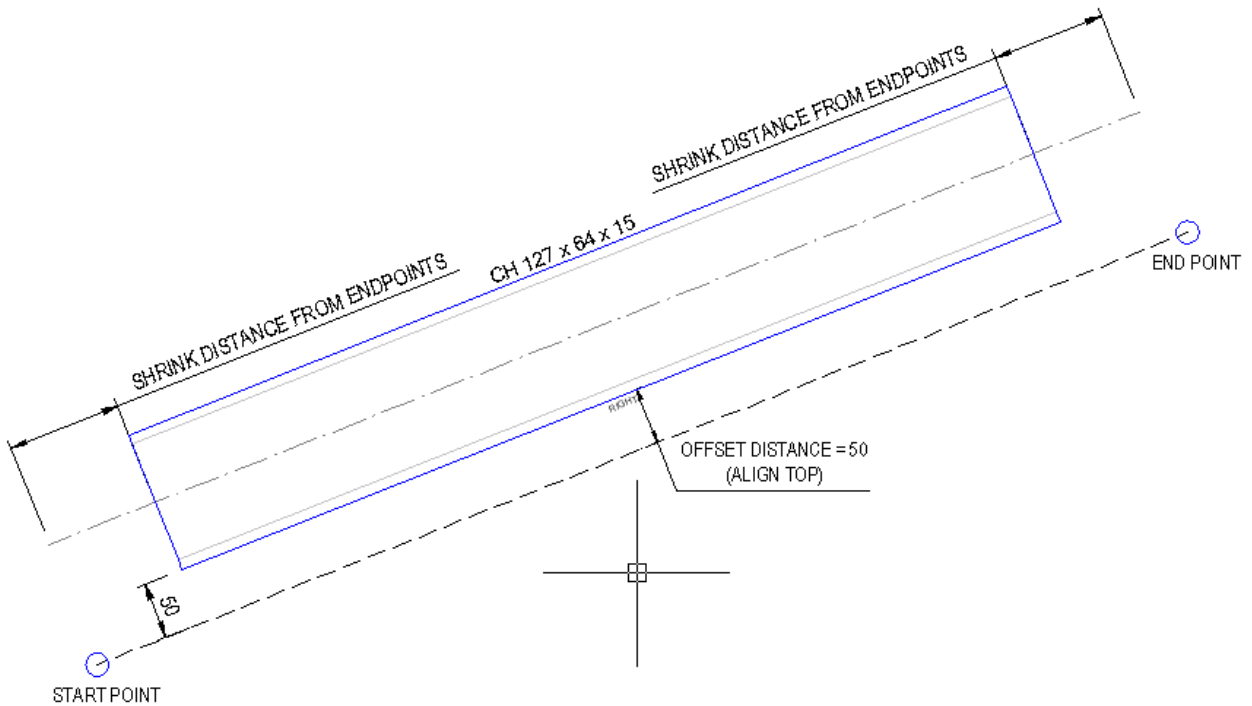
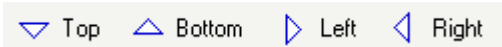


Note: Like Text object, alignment is saved in inserted section. This means when you change the section size (using ED command), the relative position remains unchanged.



Insert Section Command

3. Draw Steel Frame in Top, Bottom, Left or Right view



Steel Frame is a dynamic block. You insert it by specifying a start point and an end point. Then you have the following options of [Undo/Visibilities/Flip/Align/Offset = ...] to continue:

- Type U to undo the insert action;

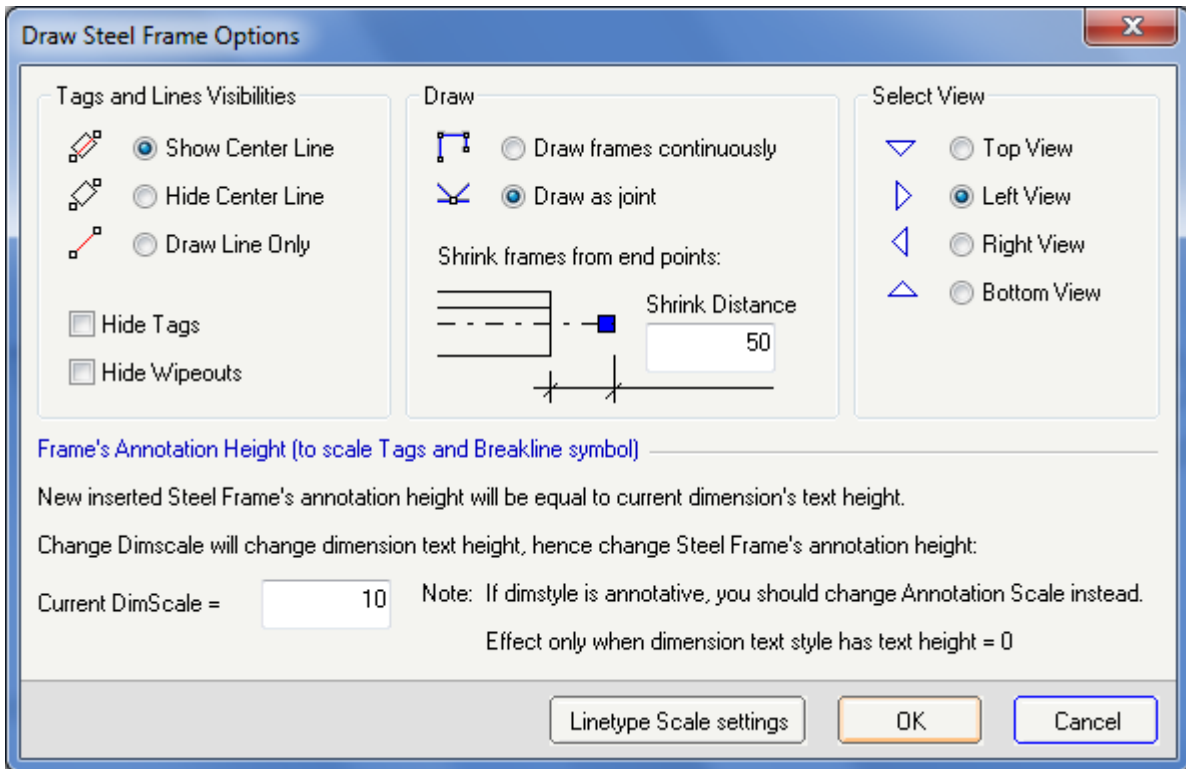
- Type V to open Draw Options window and change the visibilities of being inserted frames.
(See **Draw Options** for more information)
- Type F to flip (mirror) the frame by its center line;
- Type A to toggle through alignments. There are three options: Center, Top and Bottom;
- Type O to specify the offset distance from the alignment line (you will be prompt to specify offset distance).

Note: Alignment is saved in inserted frame. This means when you change the section size (using ED command), the relative position will retains.

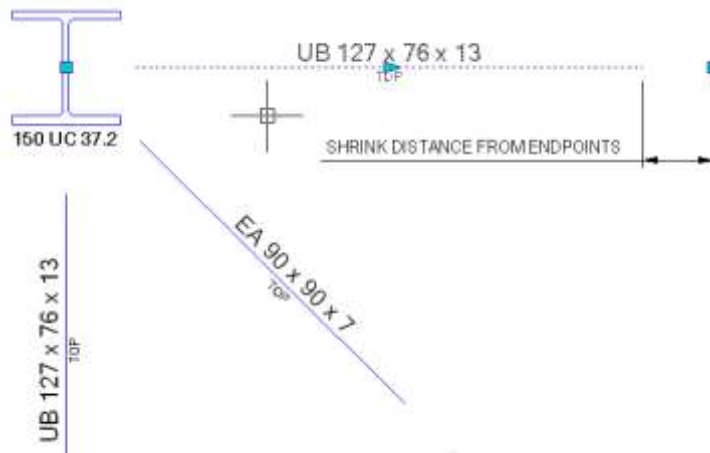
4. Draw Options

On Draw Palette, click to Draw Options menu will bring up the Draw Steel Frame Options dialog window, which will change the way Steel Frames drawn. You can also access this setting window by type V(isibilities) while draw command is running.

If Hidden and Center lines do not show correctly (especially in imperial unit drawing), you can click Linetype Scale Settings to adjust the scales.



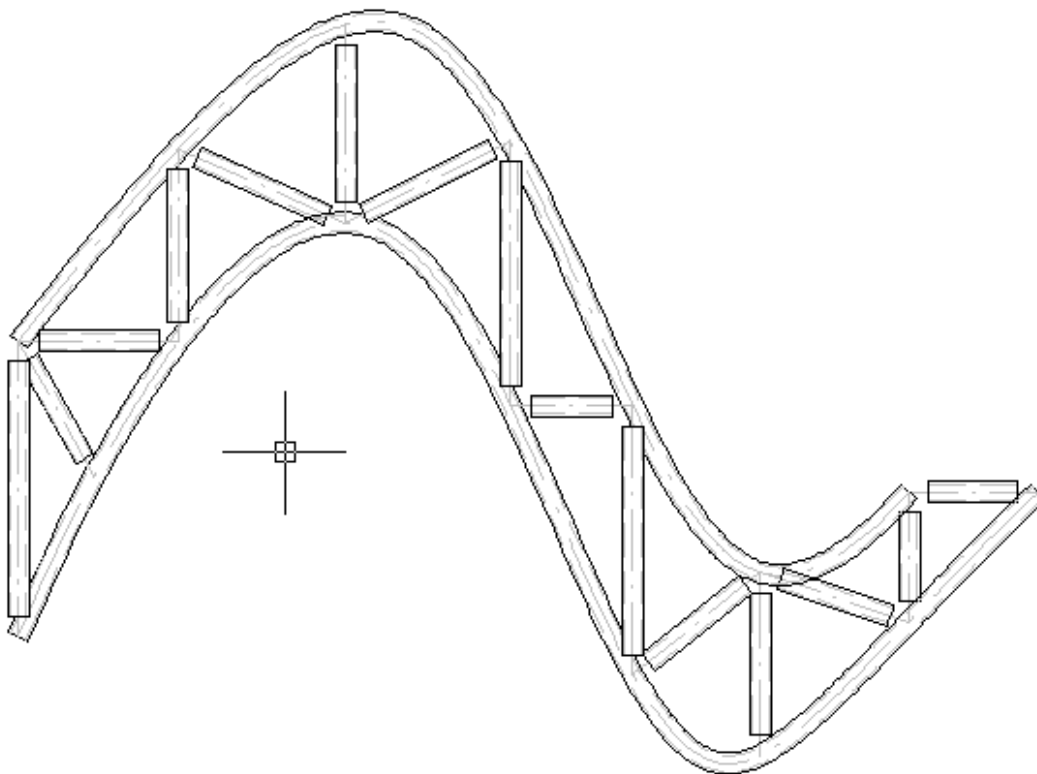
Draw Options window



Example of Steel Frames drawn in Line Only Mode

5. Convert command  Convert

This command will convert selected lines, arcs, polylines, circles, ellipses or splines to Steel Frames. The frames visibilities are also managed by Draw Steel Frame Options.




Single lines will be converted to Steel Frame dynamic blocks. Other objects will be converted to frames composed of objects of the same type. Note that shrink distance is available with lines objects only.

Similar to Draw commands, after conversion, you can change Visibilities, Flip, or toggle Alignment of frames.

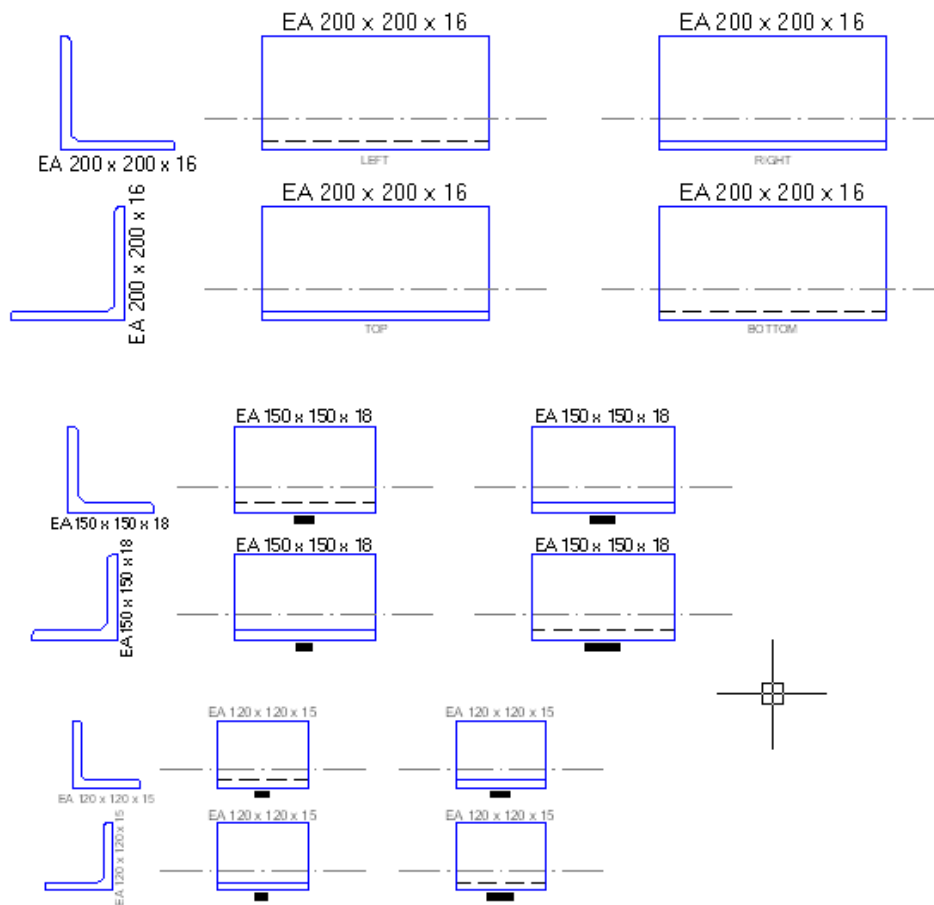
6. Insert multiple JTB Steel Sections and Frames in tabulate form 

(In version 1.2, this command named as Test JTB Steel)

If you are a new user of JTB Steel (or would like to create a local database of sections for later use) then this command will help you. Test command is always available in trial license.

Click to  button to run the command. You will be asked to select one or multiple Sections.

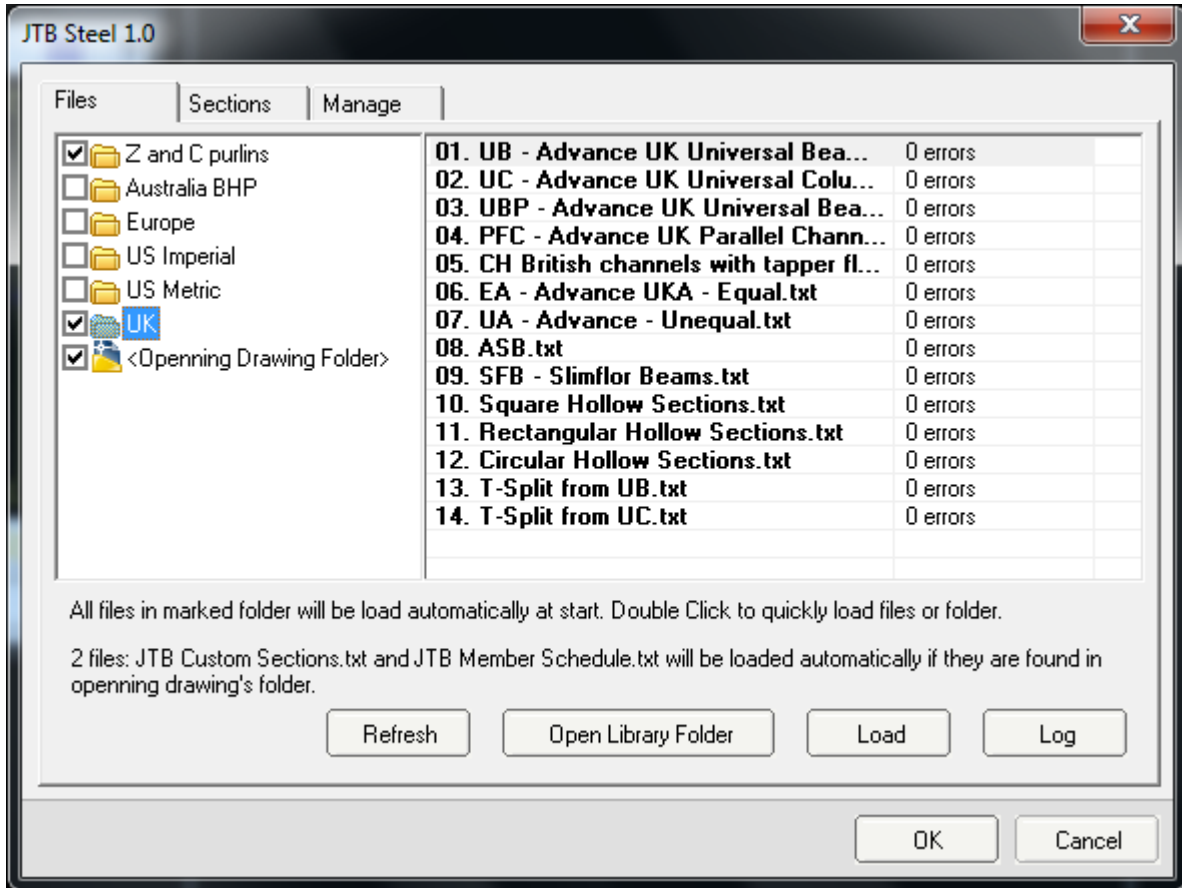
Click OK, choose an empty space in your drawing, then specify the insertion point. JTB Steel will insert all the selected sections and frames (consisting of four elevation views) in a tabulated form.



Tabulate JTB Steel Sections and Frames

7. Files (for switching between different Steel Sections database)

Click “Files” button to open Settings dialog window, Files tab:



Section database folders are listed in the left panel. Marked folders are loaded automatically at application start up as default database. You can double click on folder to load it manually.

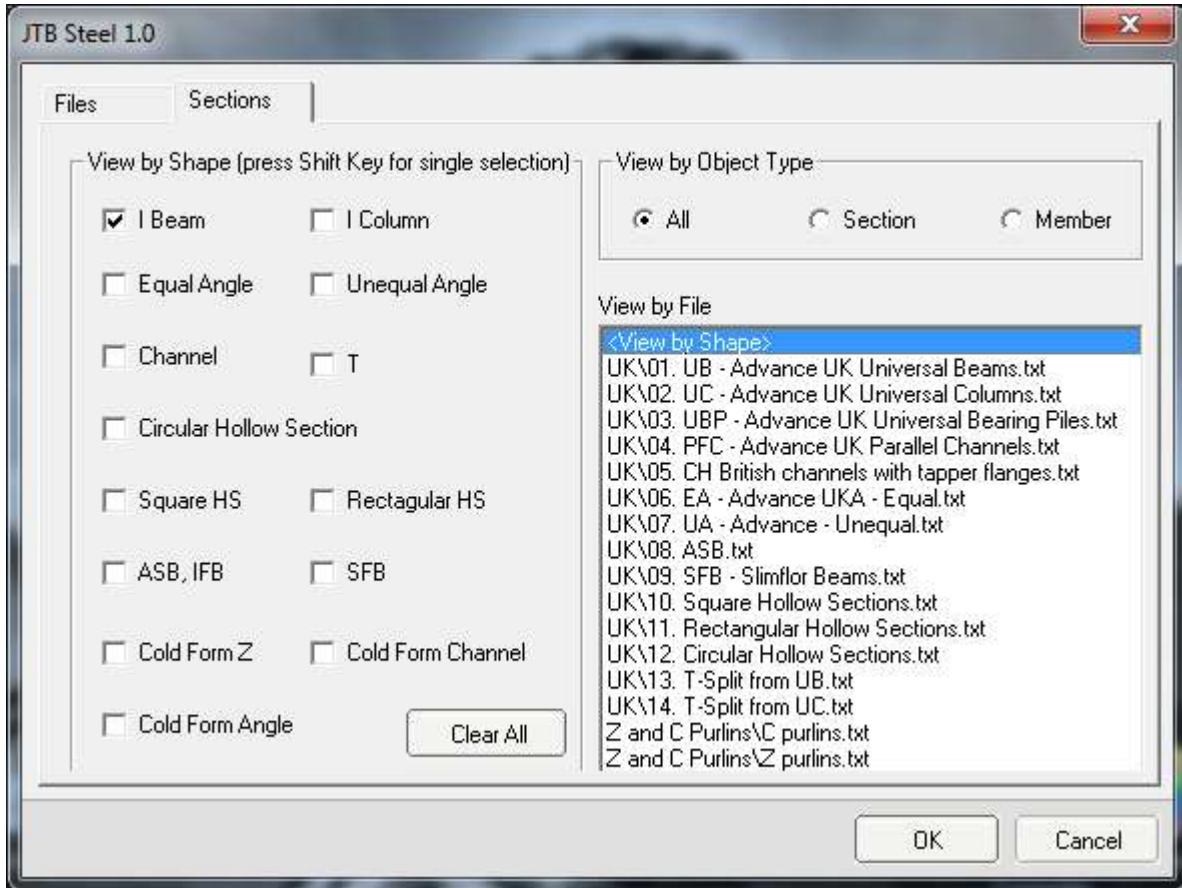
Database files in a selected folder are listed in the right panel. Double click on a file to load it. You can select multiple files and choose “Load selected file(s)” from right click popup menu.

Reinitialize

To access this command, click **Load** button → and choose Reinitialize command.

If normal load command which will adds sections to your current database, **Reinitialize** command will reset your database first, then loading your default current preference database.

8. Sections



Click “Sections” button to open Steel Sections selection dialog box. Next select category you wish to show in Draw Palette and click OK.

You can also quickly access these categories via right-click popup menu.

Steel Sections are categorized in two methods: ‘By Shape’ and ‘By File’. In ‘By Shape’ method, I Beam sections are taken as those whose Depth \geq 1.5 Flange width. Otherwise, I shape sections are categorized as I Column.

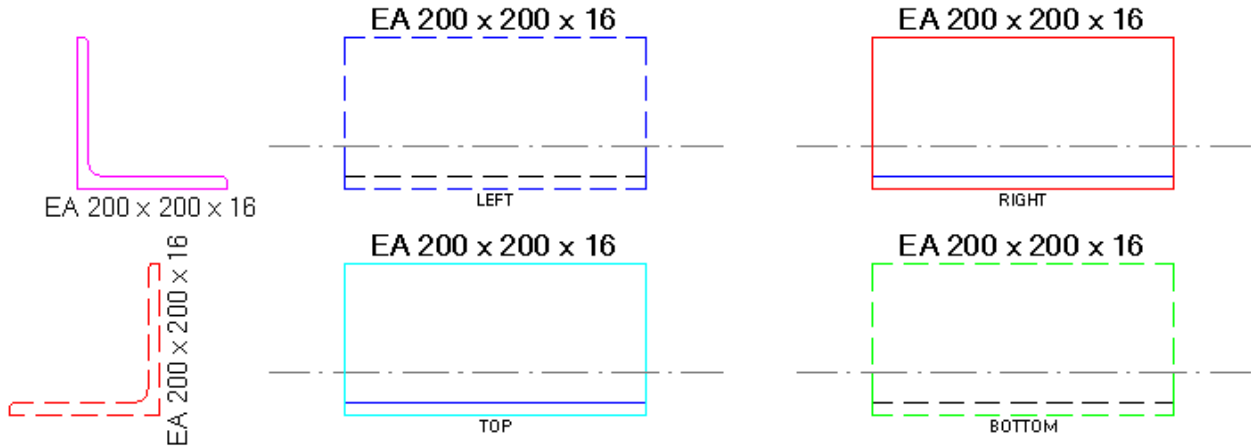
Details of Steel Objects

1. Layers, TextStyle and DimStyle

Steel objects are blocks created by lines and texts (attributes) on the following layers:

- 0
- DET_STEEL Center line
- DET_STEEL Thin line
- DET_STEEL Hidden line
- Defpoints

- DET_Steel Section Tag
- DET_Steel Frame Tag
- DET_Steel Frame View Tag
- JTB Hidden: layer to place hidden objects.
- JTB Wipeouts



All text are to JTB textstyle. JTB dimstyle is also imported to your drawing following the insertion of a Steel Frame.dwg.

You can change the colours and linetypes of Steel Objects by changing the layers and textstyles. This will effect all objects in drawing.

You can also “locally” change colour and linetype of selected Steel Objects through AutoCAD® native methods, e.g. the AutoCAD Properties Panel.

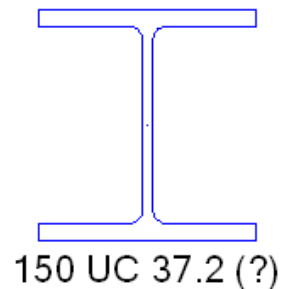
You can use JExplode command to explode blocks to lines and texts, while keeping all layers, colours, linetypes and tags unaffected.

2. Steel Section

Steel Section shapes and dimensions are defined in the Database table.
(See Draw Palette, Files for more information)

Each Steel Section has two names: Name and Mark. Both should be **unique** in the Database as are used as identification keys.

Name is assumed to be the full name, whereas Mark is assumed to be a short name, or member’s name (like BM1). Once you know how to create and manage your Database, you can assign Names and Marks freely.



For example: In Australian BHP library, angle name 200 x 200 x26 EA is marked as EA1. Angle 200 x 200 x 20 EA is marked as EA2, and so on. Alternatively, in AISC metric library, C 75 x 6.1 name is based on metric unit. This would be marked as C 3 x 4.1 based on imperial unit.

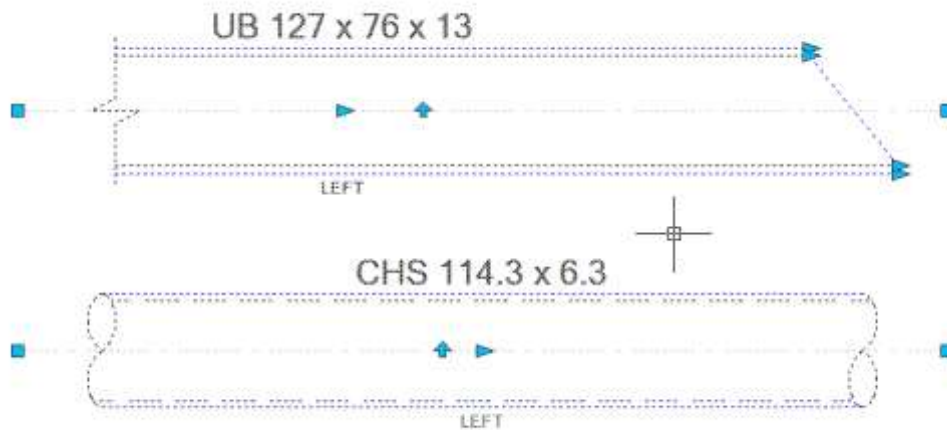
You can tag Steel Section by either its name or mark using ‘Manage’ menu to open setting dialog window.

Note: if Database files are not loaded, JTB Steel cannot recognize inserted Steel Section when editing it. Therefore Steel Object's tag would be automatically suffixed with "(?)" (image to the right). Once the Database file is loaded, use "ED"(or other tool commands) command and the suffix will be removed.

Tags in Steel Section block are constant attribute text objects and are not editable in JTB Steel nor through AutoCAD® edit command. They are placed in layer "DET_Steel Section Tag". You can turn this layer off before printing or make it non-printable. Note that the tags are not designed to be printed, these are to help with creating drawing only.

To change a Steel Section, you can use "ED", "JSChange", "JMatch" commands.

3. Steel Frame



Steel Frame is a dynamic block that has four views (top, left, bottom, right) that can be easily changed. You can stretch or edit this block using grip points as shown.

Including in the Steel Frame block are three break-line symbol blocks: Break Line Symbol, Break Line Box Symbol and Break Line Pipe Symbol.

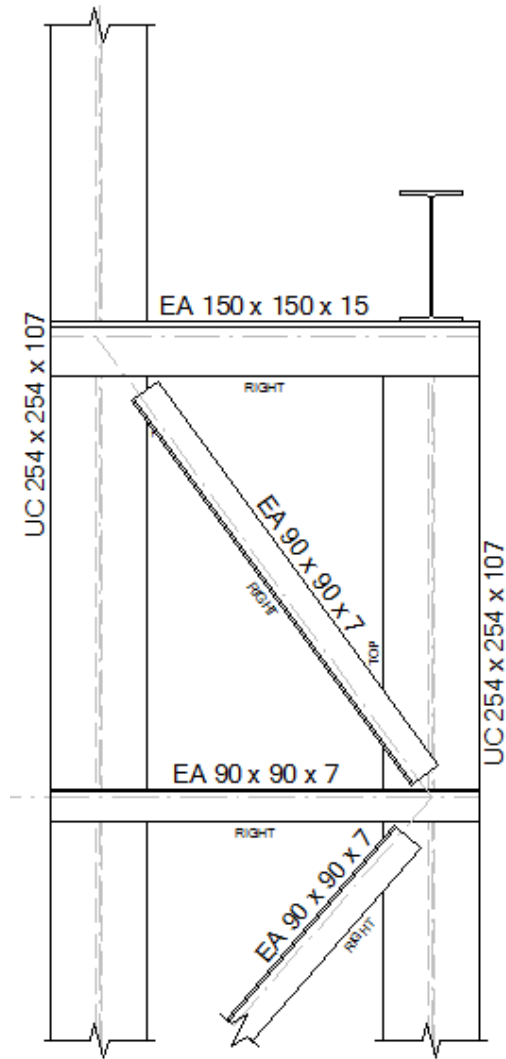
There are two tags align along the Steel Frame element. Name (or Mark) tag is place on layer "DET_Steel Frame Tag". View tag is place on "DET_STEEL View Tag" layer. These tags are normal attribute text objects. Their heights are design equal to the current dimension text height.

You can move tags along the frame using grip point.

Use "ED" or "JSChange" command to modify Steel Frame. Use Tool Palette commands to break, trim, extend or shrink Steel Frames.

Once current dimension style changes, use UP to update selected Frames Tags.

Note: While working with AutoCAD® commands, after a series of rotate, mirror or flip actions, Steel Frame may show tags upside down or backward, or no grip point found. To fix these, use "UP" command, or "ED" command (click "Select more object" to select more Steel Frames) and press OK.



A wipeout object is implemented in Steel Frame block, which can be turned on or off in each frame. Wipeouts make overlapped frames clipped automatically according to their drawing orders, as shown in the above image.

Chapter III: EDITING COMMANDS

ED and UP commands

These are 2 main and quick commands in JTB Steel working flows.

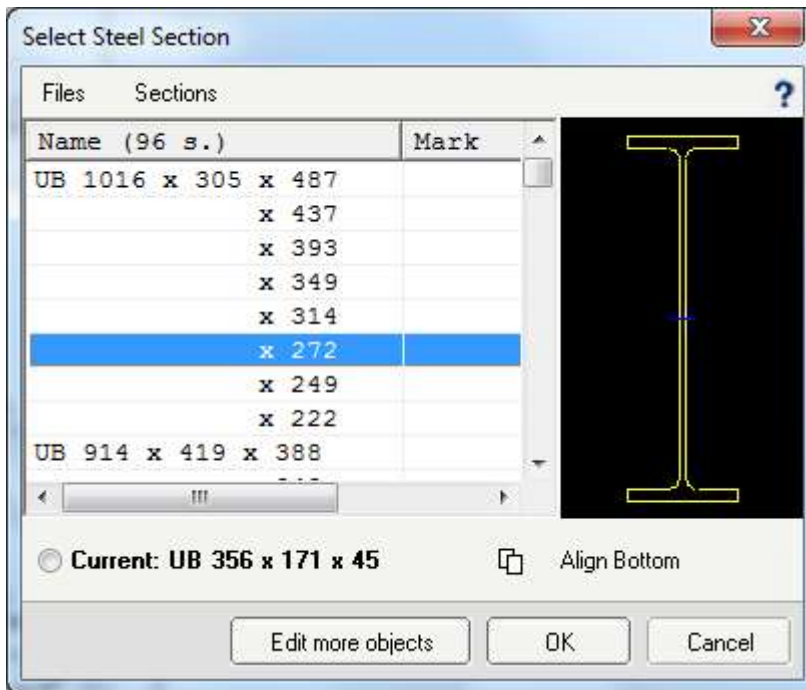
1. ED command (Edit)

Enter “ED” in AutoCAD® command line to run Edit command or click to ED button on JTB Steel ribbon.

Note: to change the command name, go to Chapter IV: Advance Usage → “Change command names” section.

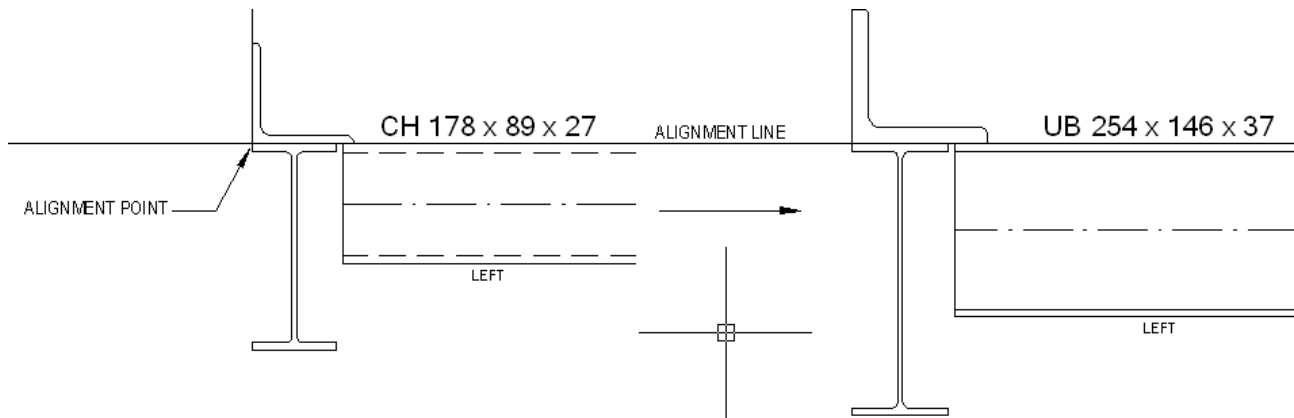
“ED” command integrates JTB Steel edit command and AutoCAD® native edit commands of DDEDIT and ATTEDIT. Hence, “ED” command will work with all Steel Sections and Steel Frames as well as AutoCAD texts, dimensions and attributes.

- Select a Steel Section on your drawing will bring up the Select Steel Section window:



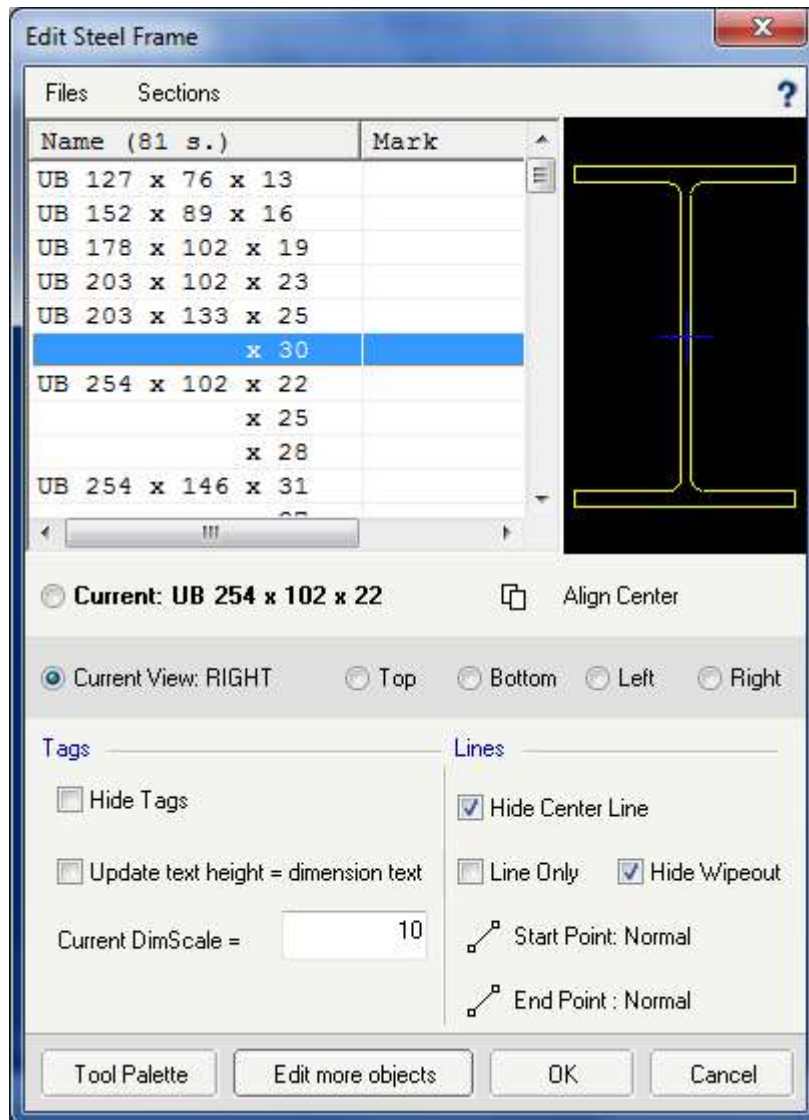
You can choose a new Section and/or change alignment. Click on “Edit more objects” command to selected more sections, and then click OK would apply change to all.

After changing section size, alignment feature keep objects retain their relative positions (see image below)



Steel objects retain alignments after changing section size

- Select a Steel Frame on your drawing will bring up the Edit Steel Frame window:

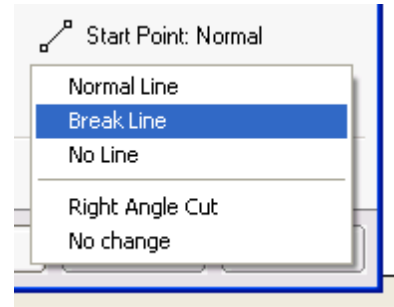


Beside changing section size and alignment, Edit Steel Frame window gives you many options to modify selected Steel Frames. Like AutoCAD® Properties palette, **you can select multiple frames by clicking “Edit more objects” button** and edit them all at once.

For example, frame end’s visibility can be switched to :

- Normal Line
- Break Line
- No Line: useful when making connection drawing.
- Right Angle Cut

(See image on the right)



2. UP command (Update)

Enter “UP” in AutoCAD® command box to run Update command or click to UP command button on JTB Steel ribbon.

Note: to change the command name, go to Chapter IV: Advance Usage → “Change command names” section.

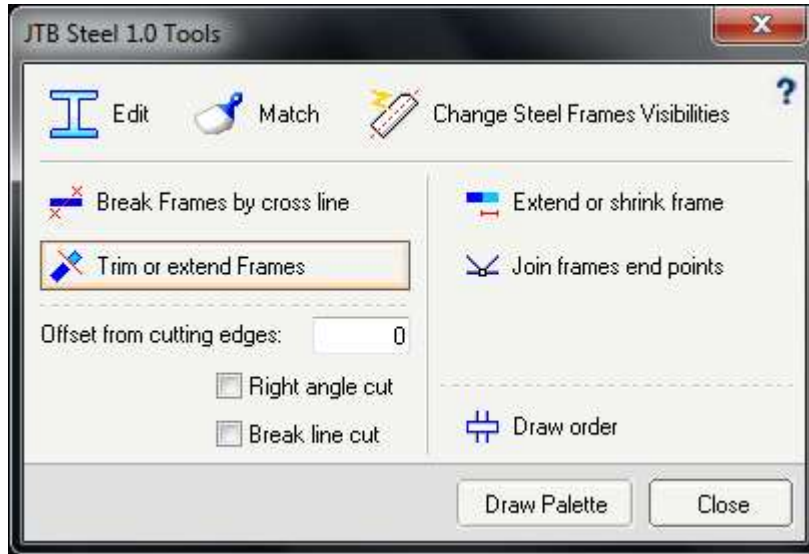
“UP” command works with Steel Objects, AutoCAD® dimension objects and AutoCAD® blocks.

Working with Steel Objects, UP command updates tag values. With Steel Frames, this command fix tag alignment and update text height to current dimension style. If Steel Frames show show no grip points, “UP” command will fix them. If you have change the linetype scale settings, using this “UP” command to update inserted Steel Frames.

Working with AutoCAD® objects, UP command updates selected dimension objects to current dimension style and update attributes fields in selected blocks.

Tool Palette

Enter “JST” (JSTEELTOOLS) in AutoCAD® command line to bring up the window:



1. Edit

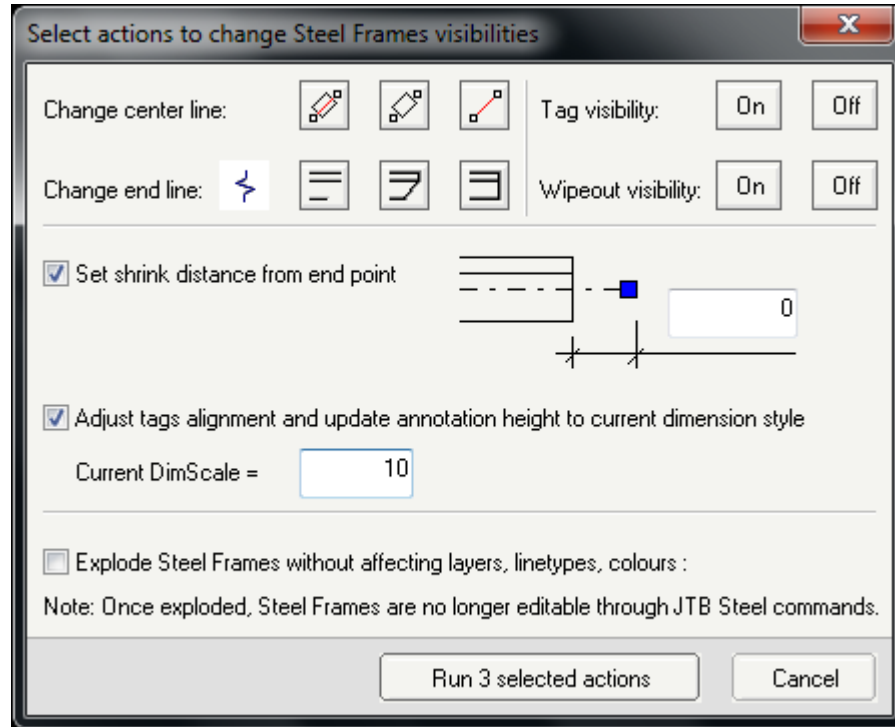
This command is similar to “ED” command, but it works on Steel Section and Steel Frame objects only (So it does not work with dimensions, attributes etc). (See “*ED command*” section for more information)

2. Match Section

Match section of selected source steel object to destination steel objects.

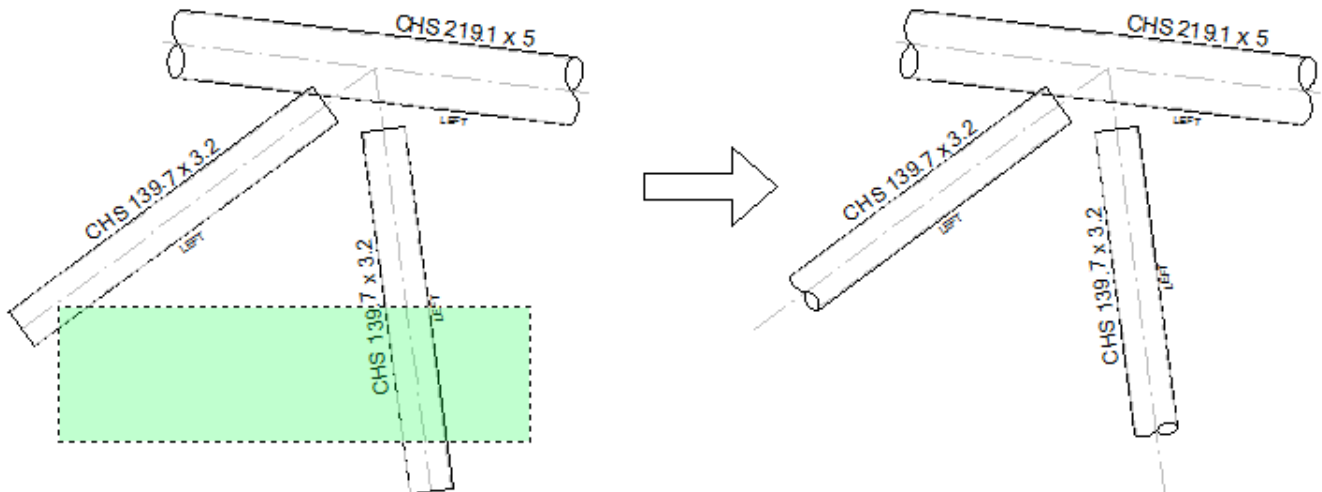
3. Change Steel Frame Visibility

This is another shortcut to JSC (JSTEELCHANGE) command.



Change Steel Frames visibilities window

Various actions for you to choose to modified Frames. Action of changing end line and changing shrink distance are depended on how you select Frames. Only frame ends which are inside (or near) your selection window (or selection point) will be affected.

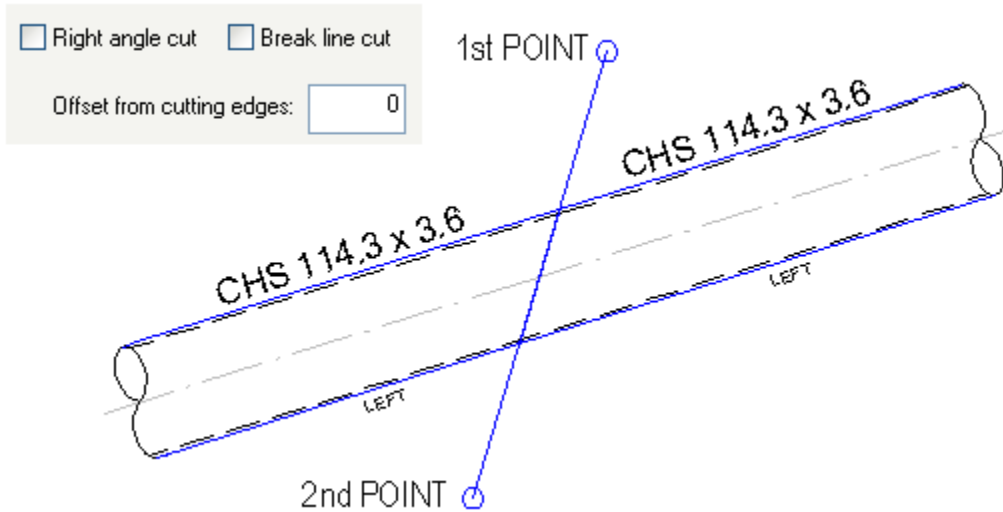


How JSteelChange command works

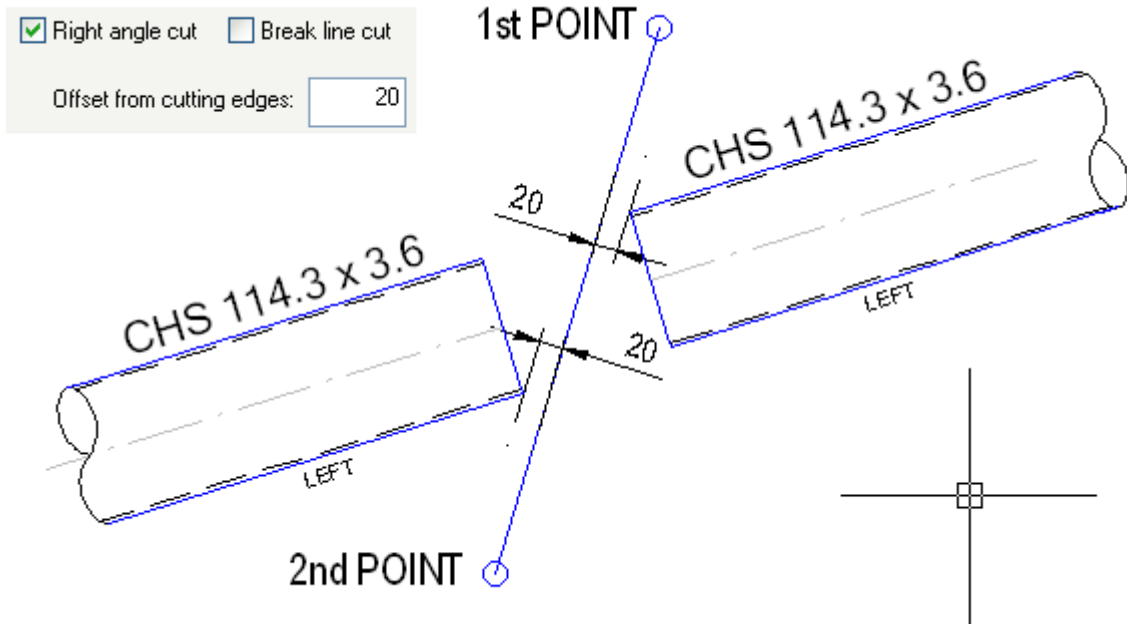
4. Break Frames by cross line

This command will break multiple (selected) frames based on a cutting line specified by 2 selected points.

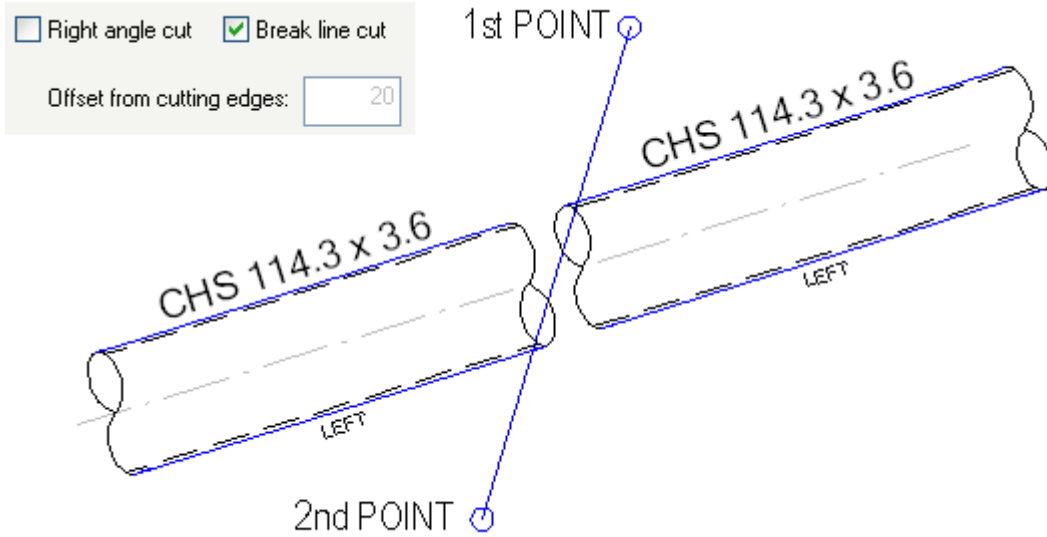
There are three options when using Break Frame command: Right angle cut, Break line cut and Offset from cutting edges. The result varies depending on Steel Frame selected and drawn cutting line. See below for examples:



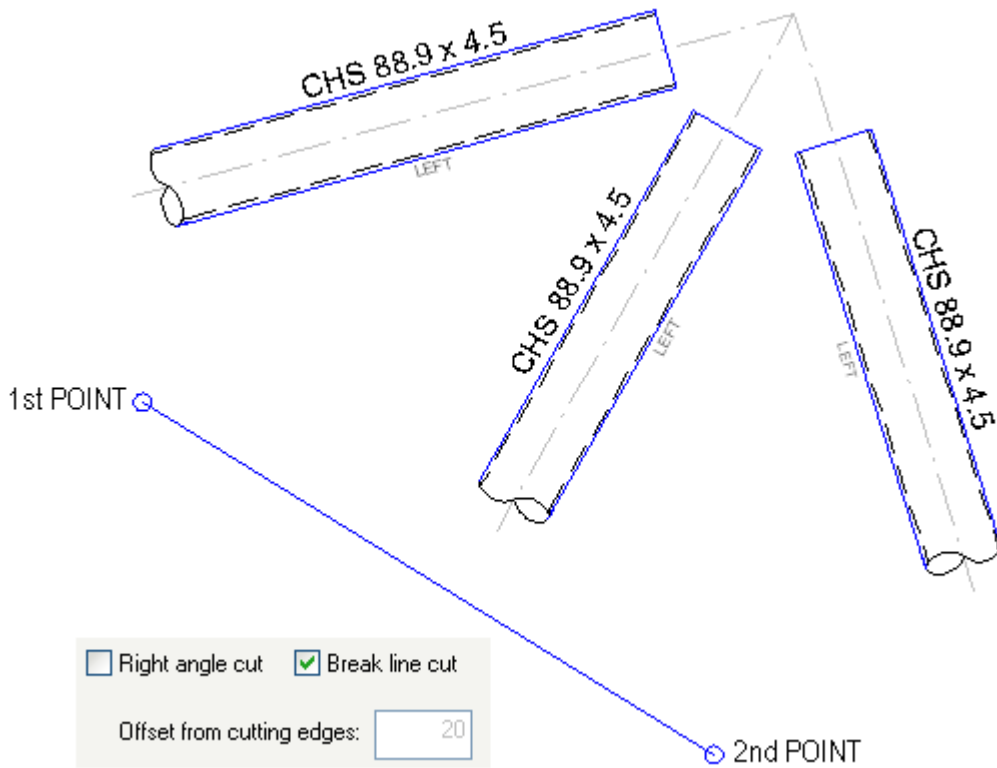
Break frame: no option selected



Break Steel Frame: Right angle cut with a 20mm offset distance from cutting edges



Break Steel Frame: “Break line cut” selected



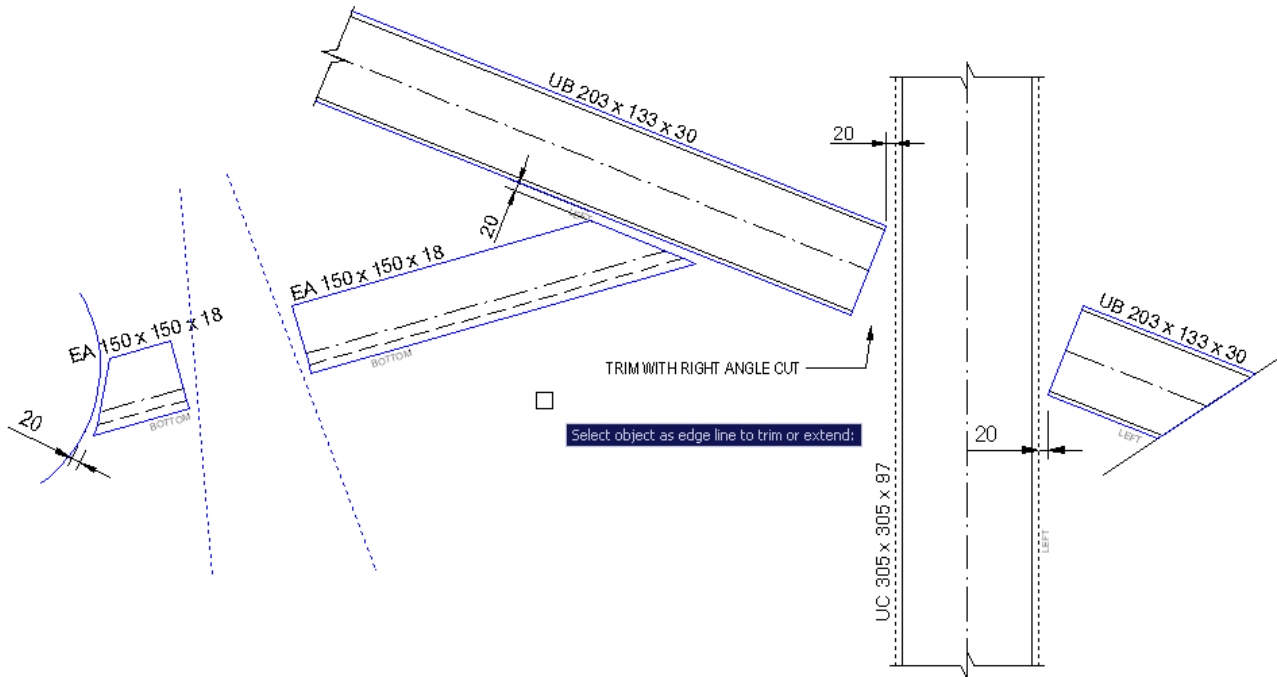
Break Steel Frames when lines do not cut: “Break line cut” option will turn frame ends to break lines, while “Right angle cut” option will turn frames ends to normal lines at Right Angle.

5. Trim or extend frames

This command will prompt you to select cutting edges then select Steel Frames to trim or extend. Similar to Break command, Trim command also varies depend on selected options: Right angle cut, Break line cut and Offset from cutting edges.

Options available while running are:

- Type “U” to undo previous action;
- Type “F” to reset offset distance to 0, or flip offset edges to the other side of the selected cutting edges. Flip is only available when offset from cutting edge is specified, and “Break line cut” is deselected.
- Press Shift key to lock the center line
- Press Ctrl key to trim/extend center line only



Trim command with Right angle cut and Offset from cutting edges = 20.

Notes about cutting edges:

- should be straight lines or polylines (though the commands accepts all types of object);
- should not be too close to selected offset distance;
- should not be rotated in too many directions.

If you want complex detailing, explode the frame to lines and edit with AutoCAD native commands.

6. Extend or Shrink.

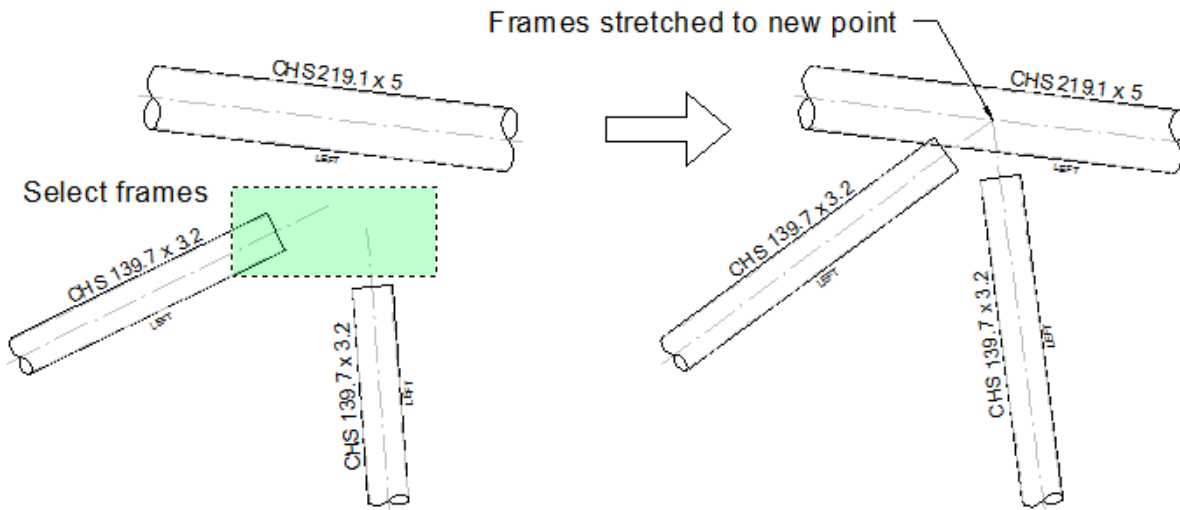
If specified distance is positive, command will extend selected Steel Frame at a selected end.

If specified distance is negative, command will shrink selected Steel Frame at a selected end.

Similar to Trim command, you can hold-down Shift key to keep center line unchanged. Hold-down Ctrl key to extend center line only. These option is very useful when creating connection details.

7. Join frame end points

This command will quickly stretch selected Frames ends to join at a specified point.



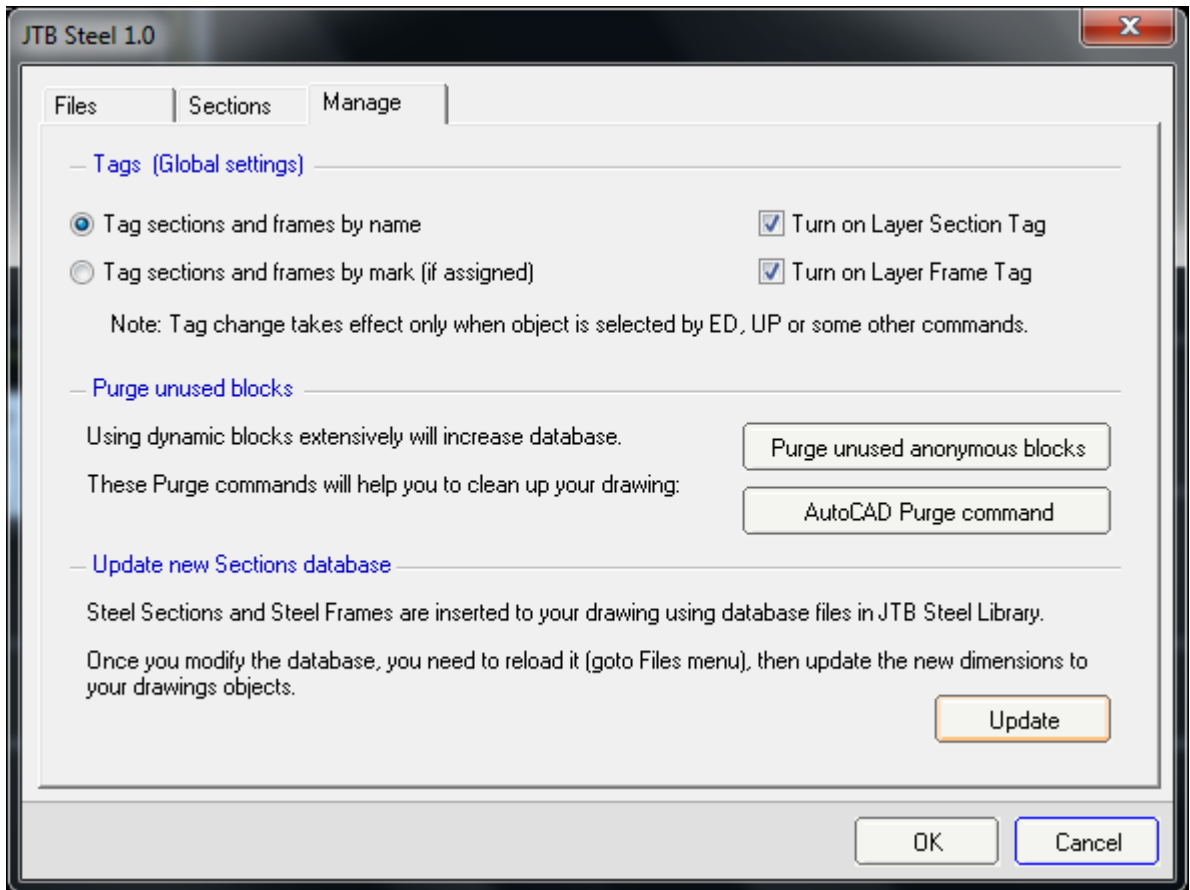
Join Frames end points command

8. Draw order

Steel frame can be shown as filled object since an AutoCAD wipeout is embedded in its definition. Beside AutoCAD DrawOrder command, this command will be useful:

- Select drawing objects in sequence which you want to show from bottom to the top
- Because your last selection will be on top, you can use a crossing window to select all the rest
- Press enter and objects will be redraw up to your specified draw order.

Manage commands



From Draw Palette, click on Manage menu to bring up the Manage window (image above).

Beside Tag Visibilities control, there are Purge commands and Update command. Purge commands will help you clean your drawing for reducing drawing file size. Update command will help you when you make changes to your database, which require update new dimension to all inserted blocks of Sections and Frames.

Other Commands from the Ribbon

1. ED (JEdit)

See “ED and UP command”

2. Match (JMatch)

Change Steel Section of all destination Steel Objects to source selected one.

3. Offset Move (JOffsetMove)

Move selected objects a specified distance from base line (or curve) to the base offset direction.

4. Explode (JExplode)

Explode inserted blocks to lines and texts without effect the colors, layers. Attributes will be converted to texts. This is different to AutoCAD® native explode command.

5. Break line (YcBreakLine)

Draw break line with Dynamic Break Line block. You can edit these blocks easily by grip points, or through Properties panel.

Similar to Frames, you can use UP command to update the objects to current dimension text height.

6. UP (JUpdate)

See “ED and UP command”

Chapter IV: ADVANCE USAGE

Change command names

- Open JTB Steel with JS command, then click to Help button on top right corner
- Click “Open App Folder” to open the folder in Windows Explorer
- Browse to Windows folder, and open Commands.lsp to edit the text, which might be as follow in some first lines:

;These followings are JTB Steel Command Shortcuts. You can modify command names which are texts after “defun C:”

```
;-----  
(defun C:JS (/)(C:JSteel)(princ))  
;-----  
(setfunhelp "C:JS" (JHelpFile "JTB Steel"))  
;-----  
(defun C:JST (/)(C:JSteelTools)(princ))  
;-----  
(setfunhelp "C:JST" (JHelpFile "JTB Steel/Tool"))  
;-----  
(defun C:JSC (/)(C:JSteelChange)(princ))  
;-----  
(setfunhelp "C:JSC" (JHelpFile "JTB Steel/Command Change"))  
;-----  
  
(defun C:ED (/) (C:JEdit) (princ))  
(defun C:UP (/) (C:JUpdate) (princ))
```

;Associated help page link to commands:

```
;-----  
(setfunhelp "C:ED" (JHelpFile "JTB Steel/Utility"))  
(setfunhelp "C:UP" (JHelpFile "JTB Steel/Utility"))  
;-----
```

If you want to change “ED” command to Your_Command, change all “C:ED” to “C:Your_Command”. Command name should contain alphabet characters only.

Create Steel Section Database

Section shapes and symbols are introduced in APPENDIX.

You can create your own Database folder following these steps:

- Open Library Root Folder with Windows Explorer and create your folder,
- Copy a Database file with required Steel Shapes to your folder,
- Rename the Database file if required,
- Open the file with Notepad. Copy all to an empty Excel spreadsheet,
- In *SETTING section, edit unit setting field to “mm” or “inch”,
- Double check the shape field,
- **Do not change “*SETTING” and “*TABLE” cell,**
- Replace the old Database with your Database. Remember your Section’s name should be unique. Otherwise, they will override each other,
- Clear the text content in Notepad. Copy text content from Excel to Notepad,
- Click Save. **Remember to save your file in ANSI format only.** UNICODE text format is not currently supported,
- You don’t need to close AutoCAD® or JTB Steel. Just reopen the JTB Steel → Files and your new folder with your new Database file will appear on the list,
- Double click to load the file.

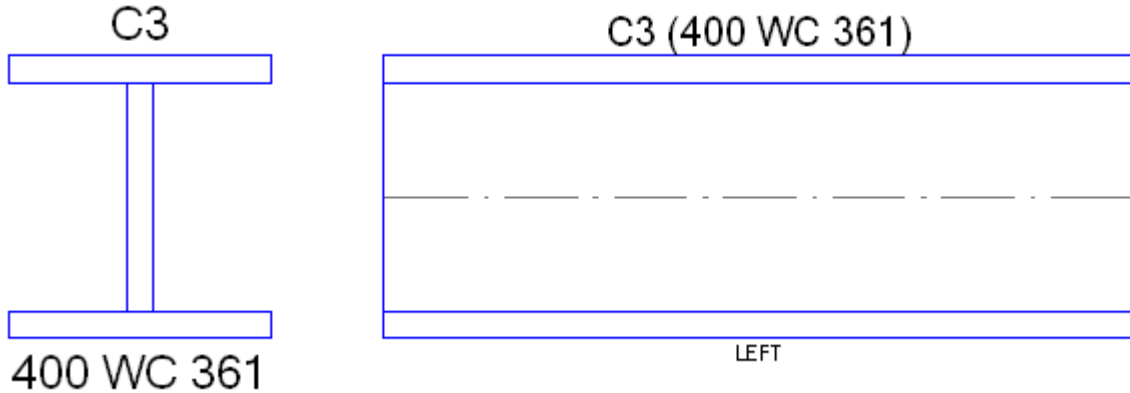
The Member and Member Schedule

In a project, you may want to tag the Sections by the member’s name from a member schedule like this:

Member	Section
C1	500 WC 440
C2	350 WC 230
C3	400 WC 361
B1	PFC 200 x 75 x 23
B2	300 ASB x 249

Other than Section object, JTB Steel has Member object type defined by two fields: Member and Section.

Member with assigned marks would be tagged as shown below:



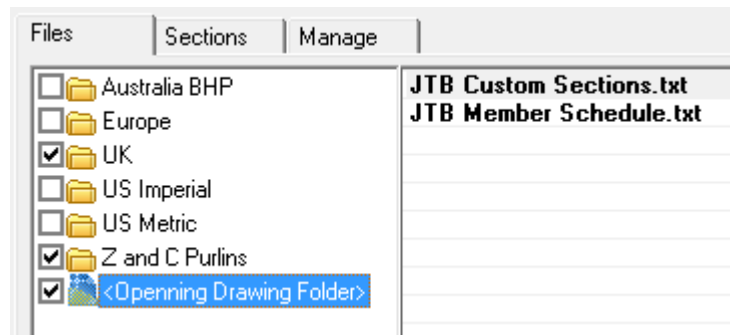
Member definition Database file should be named as *Member Schedule*.txt (where * stand for any text). JTB Steel will recognize the file by this name syntax and load it as member schedule. The text content in member schedule Database file is a simple table with two columns separated by tab key:

Member	Section
C1	500 WC 440
C2	350 WC 230
C3	400 WC 361

Member schedules are easy to modify, as these are expected to be modified often. Once it is modified, you should reload Database file, and run Update command from Manage tab.

JTB Custom Sections.txt and JTB Member Schedule.txt files

Custom sections (usually built up sections) and member are expected to be modified often on per-project basis. JTB Steels has a solution to this issue: other than the Database, two files: JTB Custom Sections.txt and JTB Member Schedule.txt can reside in an opening drawing folder and are automatically loaded at start up (if exist).



These Database files are mark in JTB Steel as “local” Database. Each time you open, or switch to another drawing, all local Database files of previous opened drawing will be cleared, and JTB Steel will reload the JTB Custom Sections.txt and JTB Member Schedule.txt in a new local folder (if found).

APPENDIX

Issues and Frequently Ask Questions

JTB Steel runs slow on AutoCAD® 64-bit

JTB Steel originally is 32-bit Visual Basic 6 application. In AutoCAD 64-bit, JTB Steel cannot get priority focus from AutoCAD. This means AutoCAD does not “freeze” when a modal dialog of JTB Steel is active. Sometime mouse cursor over AutoCAD window disappears.

A tip to deal with this issue is quite simple: while a modal dialog of JTB Steel is running, do not click, type, or pan on AutoCAD screen. Just waiting and follow the software instruction until the dialog closed.

Finally, we are working on a VB.NET version of the add-in that will work efficiently with all AutoCAD® versions.

JTB Steel is not loaded at start up (AutoCAD 2011 and earlier issue)

Open JTB Steel.exe from your desktop, click “?” help button on top right corner, to open Quick Start window and click “Add to Startup Suite” to add JTB Steel Startup.lsp to Startup Suites of all AutoCAD users profiles.

What does Mark of Steel Section mean ?

Mark is an alternative name of a Steel Section defined in sections database. You can open the database to modify it. In our US – Imperial database, the metric section’s name is assign to Mark. In Australia sections, Mark is a popular shorter name of the section.

See *Chapter II: Details of Steel Objects* and *Chapter IV: Advance Usage* for more information.

Steel Frames do not show the grips

Dynamic Block lost all of its grips after it was scaled non-uniformly. Any differences, as small as 0.000000001, in the three (X, Y, Z) scale values would lead to this issue. Due to some error in AutoCAD, rotate and mirror command sometime shift these scales.

To restore everything back uniformly again, use “UP” command and select all Steel Frames. You can also use “ED” command, click “Select more objects” to select more frames, and click OK.

The centroid coordinates do not match with my steel dimension database

Centroid by default, if not clearly assigned, is auto calculated value by integration along the section’s polyline. Any discrepancy in the dimensions would make the result different.

If you want the Centroid exactly as shown in your database, contact us. We would generate a database for you use for free of charge.

I cannot find my section in the database

You can send us your database in excel spreadsheet format. We would generate a JTB Steel database to your standard. You can do it by yourself as well by studying Chapter IV: Advance Usage, Create Steel Section Database.

My layer lock status changes after running JTB Steel

Generally, JTB Steel will unlock the current layer and JTB Steel's layers when running commands in order to edit objects.

Cannot restore AutoCAD® window by click to Taskbar after minimize

This is a side effect happen only when JTB Steel modal dialog is active. You can use Show Desktop command on Window Taskbar (shortcut is Windows+D), then click to AutoCAD icon again to restore it.

How to install AutoCAD® VBA (for Win32 OS only, if not already installed)

In Windows 32-bit OS, VBA will help JTB Steel shows palettes as floating windows. Note that this is not mandatory.

VBA stands for Visual Basic for Application, designed by Microsoft® Corp. AutoCAD® VBA is a free package for developer to create add-ins to automate AutoCAD. Since VB.NET technology is to replace old Visual Basic language, VBA is no longer included in AutoCAD® installation package.

To install AutoCAD VBA, please do these following steps:

- browse to Autodesk® page via the link in the pop-up message (as above), or follow this link: [Download the Microsoft Visual Basic for Applications Module](#)
- download a compressed zip file with a VBA installer version matching your AutoCAD® version.
- close all running AutoCAD® sessions.
- unzip and run the VBA installer.

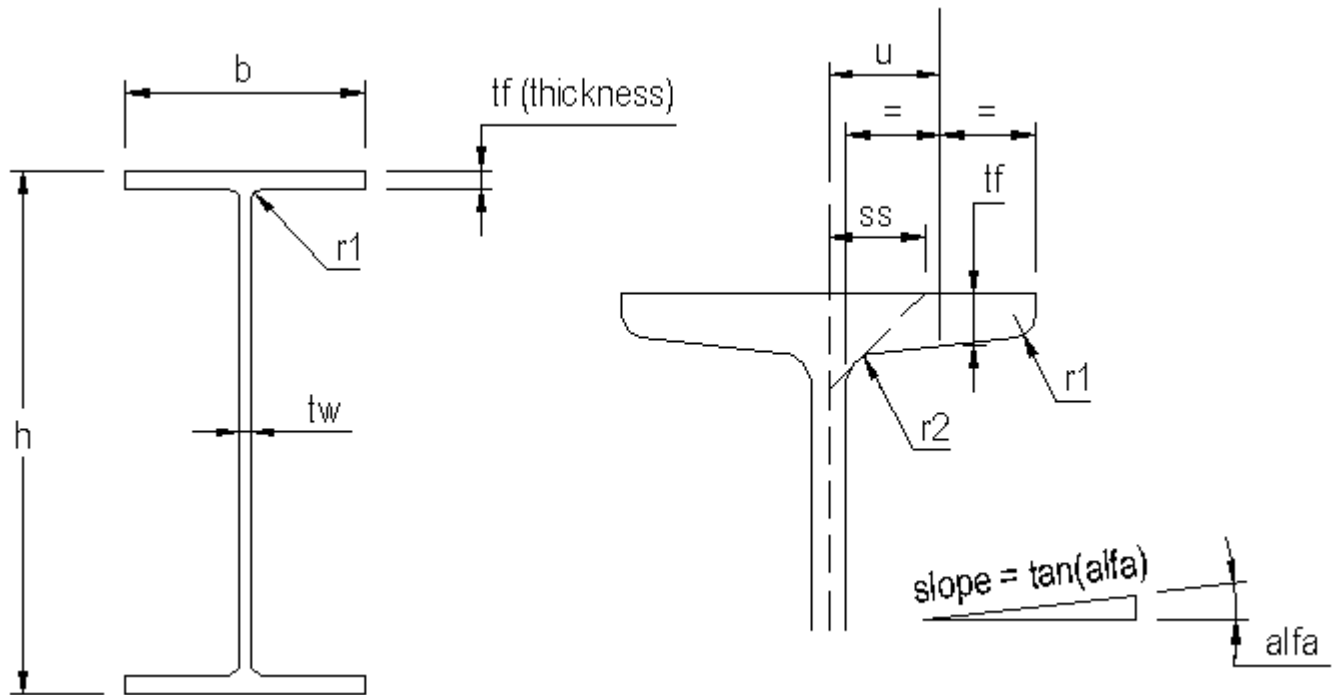
Section shapes and symbols

Shape and dimensions are specified in Database file. The centroid is automatically determined using integration calculations incase shape is not symmetric.

There are 10 shapes types:

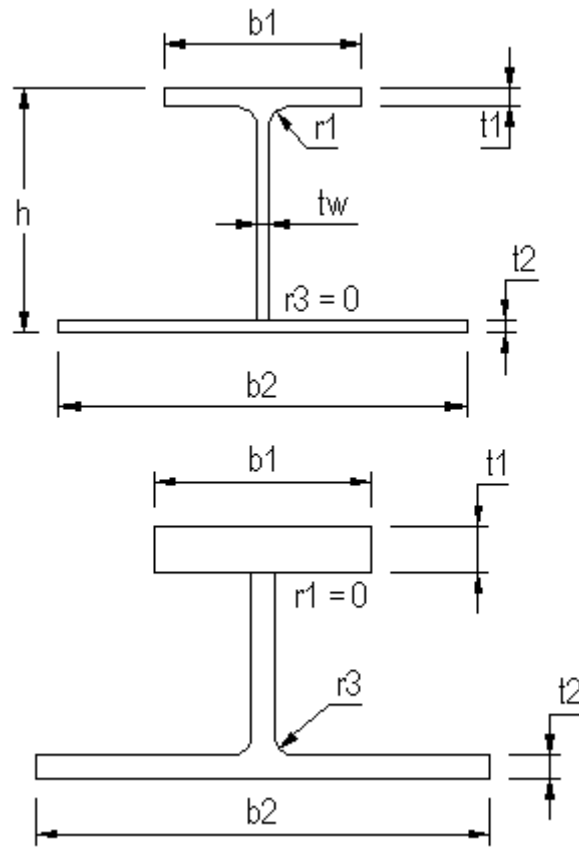
- I (including I shape, AFB in IFB shape)
- T
- Channel
- Angle
- Box (Rectangle or Square Hollow Section)
- Pipe
- Cold Form Z
- Cold Form Angle
- Cold Form Channel
- SFB

Annotated drawings of every shape type are shown below:



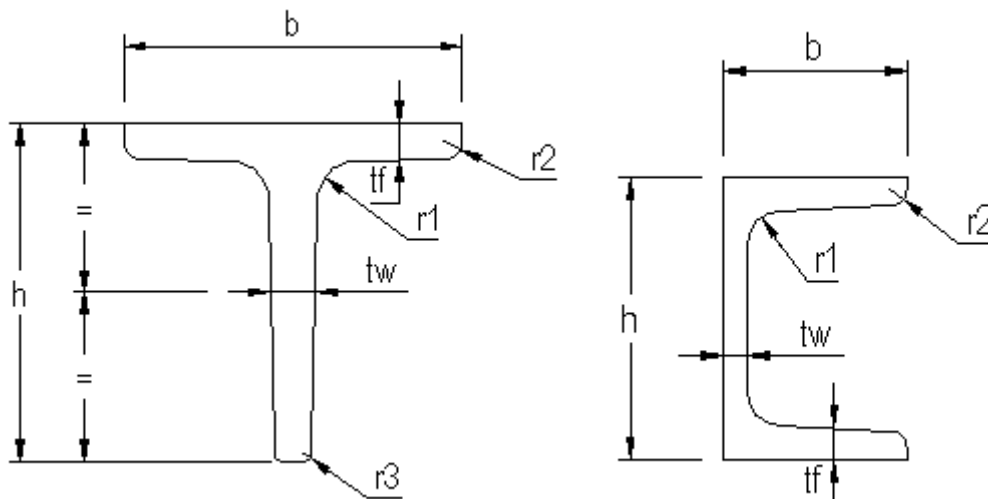
I SHAPE

Note: In taper flange, ss , $r2$ and slope are parameters constrained by function. If not specified, u is assumed to be at middle of the projected flange.



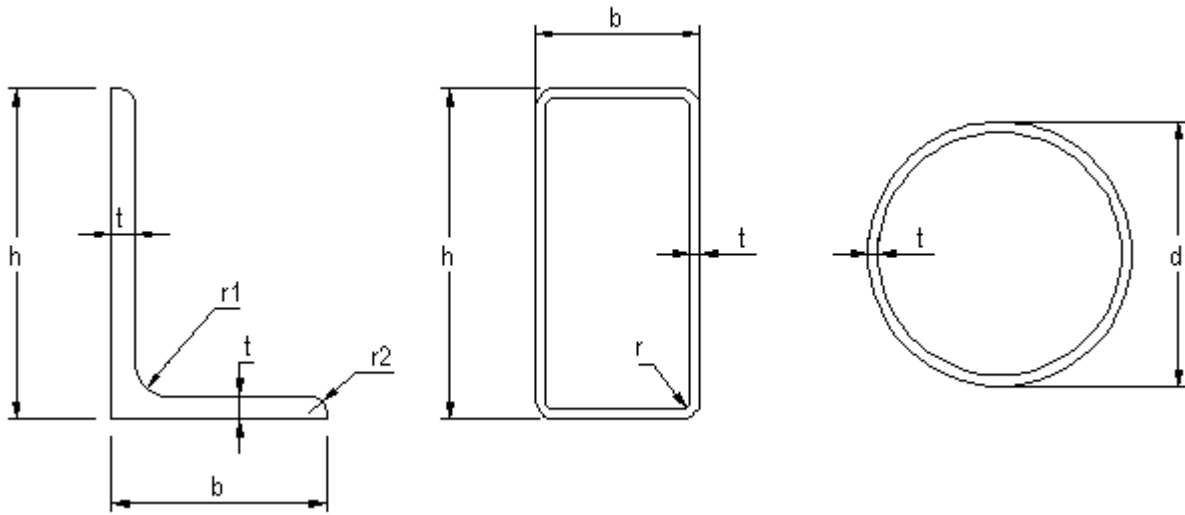
A VARIATION OF I SHAPE WHICH FORMS AFB OR IFB SECTION

Note: If root radius = 0, it is assumed flange is a plate.

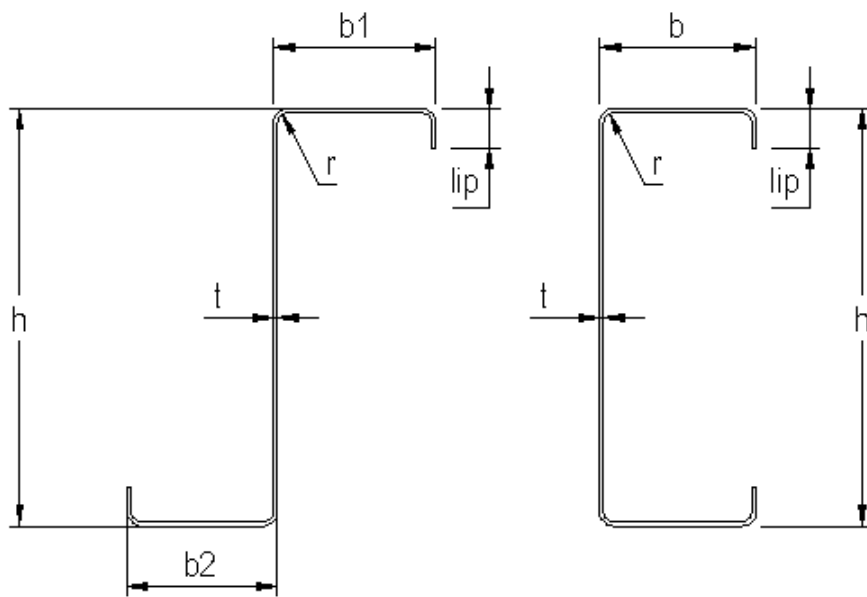


T SHAPE AND CHANNEL

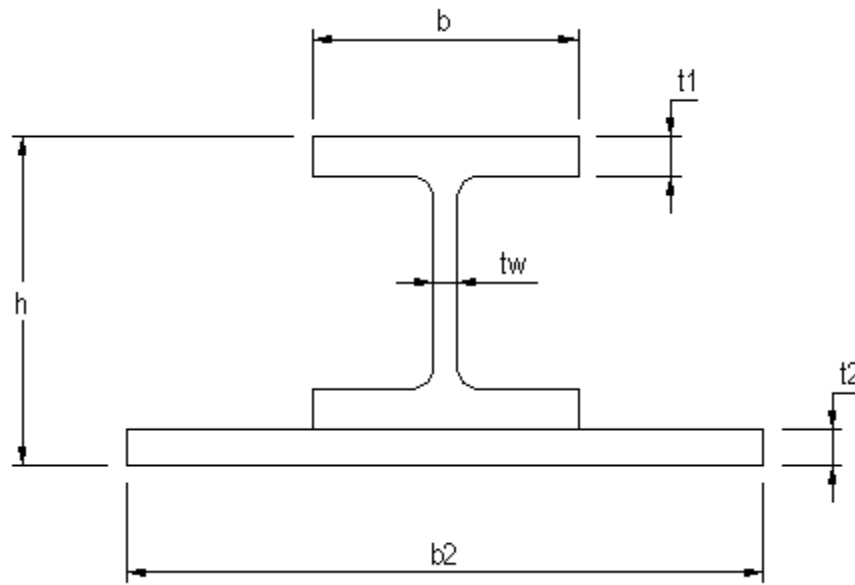
Notes: Tapper flange of T Shape and Channel Shape are similar to I Shape



ANGLE, BOX and PIPE



COLD FORM Z AND COLD FORM CHANNEL



SFB SHAPE

Version History

1.3

Add hatched property to steel section.

1.2

Added support for all Windows Region and Language settings.

1.1

Added support for AutoCAD 2016

1.0

March 2014: Initial release.



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For support, email us at : info@jtbworld.com

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