

What is the latest version of MassPlus?

The latest version of MassPlus is 7.0 released April 30, 2014.
MassPlus XG 5.0, 4.0 and MassPlus classic have been discontinued.

What are the new features of MassPlus v7.0?

V7.0 now calculates both Outer and Inner (if available) Perimeters of a shape.

The calculations table also references the values that are calculated by AutoCAD's massprop command on a region. You may compare AutoCAD's values with MassPlus values.

A table comparing the different versions of MassPlus is available from <http://slickwin/mpftp/mpcompare.pdf>

MassPlus v7.0 can run by itself or can be called to from the AutoCAD command line via the provided autolisp routines. Previous versions require two different executables and two different serial numbers.

Entities belonging to the shape may be selected in AutoCAD and passed on to MassPlus. The selected entities will be displayed on the MassPlus graphics window.

Support for:

- AutoCAD 2D Regions
- Splines
- Mesh of the Section being analyzed is shown
- Maximum distance from the centroid is calculated
- Ellipses are supported; More accurate calculations for ellipses are attained by setting the AutoCAD variable pellipse to 1 before creating the ellipse.

The *plastic section modulus* of the section is now calculated. The distances of the neutral axis (PNA y and x) from the top, bottom, left, and right of the section are also calculated.

MassPlus XG v3.3, 4.0 and MassPlus Classic v2.2, 2.3 frequently asked questions

What are the differences between MassPlus XG v3.3 and MassPlus Classic v2.2?

The main difference is that v3.0, v4.0 MassPlus XG runs completely independent of AutoCAD. You will need AutoCAD, IntelliCAD or any AutoCAD clone with AutoLisp to run MassPlus Classic v2.1.

For a complete comparison, go to www.slickwin.com/mpftp/mpcompare.pdf

What are the drawing requirements for MassPlus XG v3.3

The drawing must contain only lines, arcs, and circles. Polylines and lightweight polylines are acceptable since the software will explode these automatically. Since the software analyzes the entire drawing, there must only be one shape per drawing. .

What are the drawing requirements for MassPlus Classic v2.2?

The drawing must contain only lines, arcs, and circles. Polylines and lightweight polylines are acceptable since the software will explode these automatically.

Since this version runs inside AutoCAD, you can select the entities to be analyzed by the software. If you are analyzing a region or block, you must first explode them. The selected entities must only consist of lines, arcs, circles, and polylines or lwpolylines.

Why are the calculations incorrect?

Possible reasons:

- Duplicate lines are present in the geometry. For example, if the shape is a square, there should only be four (4) lines in the shape.
- A straight line is broken into two or several individual lines or segments. Combine the individual lines into just one straight line

MassPlus displays the number of entities processed (lines, arcs, and circles). This can provide a clue if the program is processing extra entities.

One good test is to hatch the shape in AutoCAD. If the shape hatches correctly, MassPlus can correctly calculate the area properties.

Why do I get the error message “Massplus.dxf not found” when I run Massplus Classic v2.1?

This error sometimes come up when running v2.1. The most common reason why this occurs is when you try to execute mpwin.exe directly. Always start massplus by running the the script file mpwin.scr. The script file will create massplus.dxf from the selected entities in the autocad executable directory and will launch mpwin.exe.

For versions of MassPlus Classic after 10/27/2005

The newer versions of MassPlus for Windows creates the temporary massplus.dxf in the c:\windows\temp folder.

Some computers using Windows NT will not have this folder. Instead, the main windows directory is in c:\winnt. If your computer is configured this way, simply create the c:\windows\temp folder if it does not currently exist in your computer.

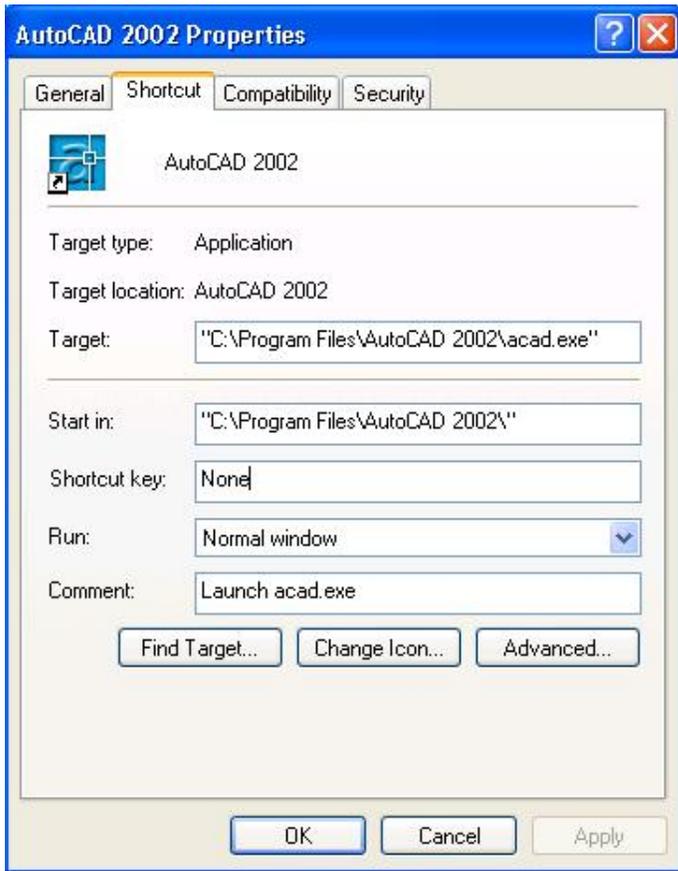
For versions of Massplus Classic prior to 10/27/2005

The other possible reason is that you specified a different start-in directory when you created the shortcut for AutoCAD. Since massplus creates the dxf file in the directory where acad.exe is located, it will always try to look for the file in this folder.

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If you specified a different start-in or working directory, the dxf will be created there and massplus will not be able to locate it.

The start-in directory may be specified by right-clicking on the AutoCAD shortcut and clicking on Properties. See sample illustration below:



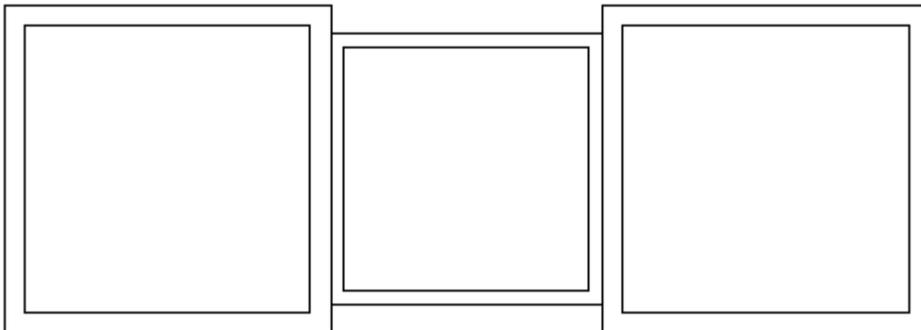
Why are the centroid and centroidal moments not being calculated correctly?

Check the drawing to make sure that the UCS Origin is set to 0,0. If the origin is set to values other than 0,0, this could cause MassPlus to incorrectly calculate the centroid and centroidal moments.

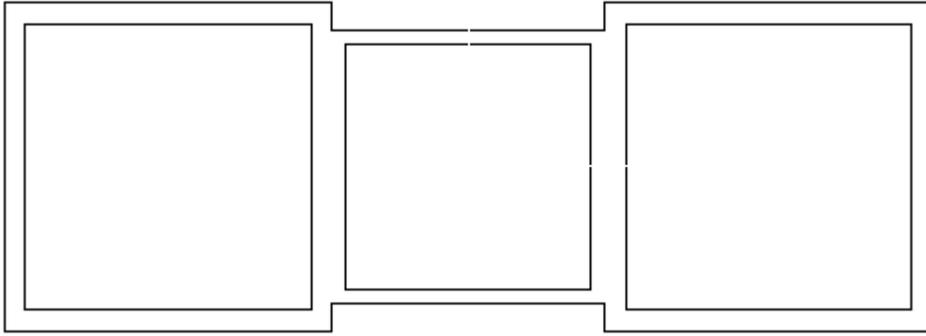
Can I calculate composite sections?

Yes, if internal lines are removed. The following illustrates this.

This geometry is not acceptable to MassPlus:

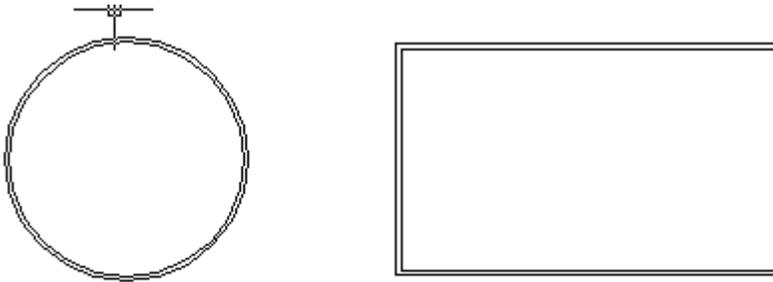


This geometry is acceptable to MassPlus:



The properties of my thin-walled or hollow section are not being correctly calculated? MassPlus seems to be using the entire area of the section.

MassPlus calculates section properties by calculating the area of the section. For thin-walled or hollow sections, you must define a thickness for the section using the highest possible number of component areas of 50,000. See example below.



Why do I get a “Lines are parallel” error after I enter the “answer” command to display the MassPlus Classic results in my AutoCAD drawing?

MassPlus attempts to draw the angle of rotation of the principal axes in AutoCAD. If the angle is very small, this error is generated by AutoCAD.

Can I run MassPlus on a 2D cross section of a 3D drawing?

The 2D cross section of a 3D drawing contains values for the Z-axis. As such MassPlus cannot work with it. However, in most cases, you can copy the 2D cross section into a brand new 2D drawing and MassPlus can accurately calculate the area properties.