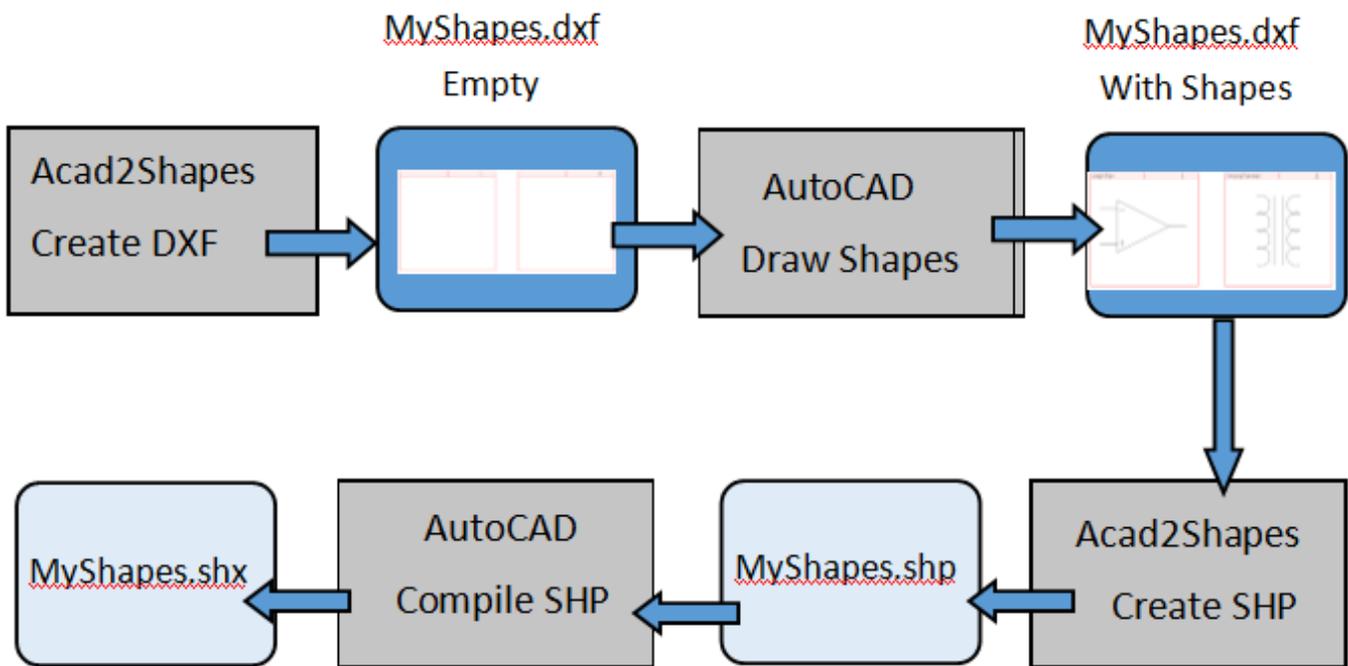# Acad2Shapes Help

Overview

Acad2Shapes is a compiler and organizer for AutoCAD shape files. You can create up to 255 shapes into *one* shape (shp) file from a supplied template DXF file.

The ShapesTemplate.dxf file contains 255 boxes, one for each shape. The software has a function to create an empty dxf file from this template. In the example below, you saved the empty dxf file as MyShapes.dxf. You can then use your AutoCAD software to add shapes into the individual boxes using ordinary AutoCAD commands such as LINE, CIRCLE, ARC, PLINE, POLYLINE, ELLIPSE, and even standard TEXT!

After creating your custom shapes dxf file, you run Acad2Shapes to produce a shape (shp) file. After compiling and loading the shp file in AutoCAD, you are ready to use your shapes! Simple!

Creating compiled SHX shape files using Acad2Shapes

Why use Acad2Shapes?

- You can easily view all the shapes, insertion points, and their shape names by just opening the DXF file used to create it!

- You can establish the scale of your shapes relative to each other by using different heights!

- You can easily modify or create new shapes by editing the DXF file! Then simply regenerate the shape file using Acad2Shapes and then recompile in AutoCAD!

- Acad2Shapes is very easy to use! The lisp function *zbox* is provided to zoom into any shape box. The lisp function *zname* will zoom into the upper left hand corner to enter the shape name! And of course, just enter any point within the shape box to define an insertion point!

- You can organize your shapes into different DXF files! For example, landscaping, plumbing, furniture, electrical, and so forth.

Installation

Download Acad2Shapes.zip from the company website, unzip, and run setup.exe.

Add Acad2Shapes to AutoCAD Search Paths

When creating your shapes in AutoCAD from the shapes DXF file created by Acad2Shapes, you will need support files installed in the Acad2Shapes Support folder. The path to this folder is:

C:\Program Files (x86)\CAD Systems Unlimited\Acad2Shapes v1.0\Support\

Click on your AutoCAD Options menu and Browse to this folder. And then add it to AutoCAD Support File Search Path
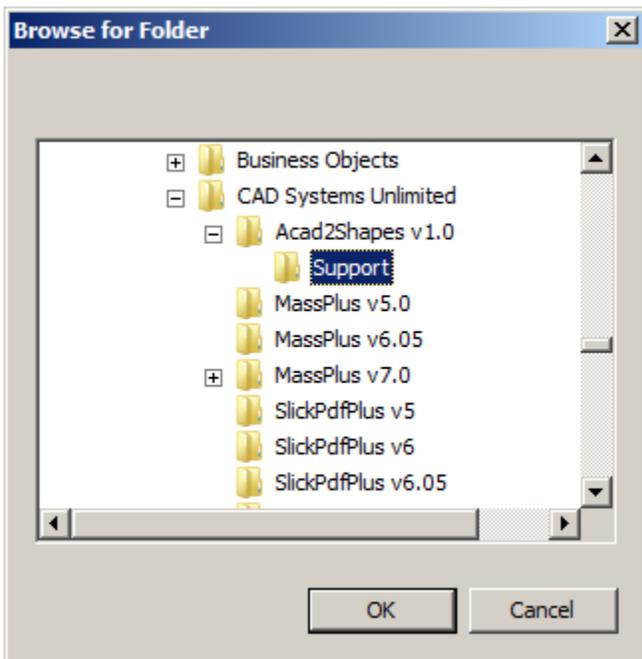
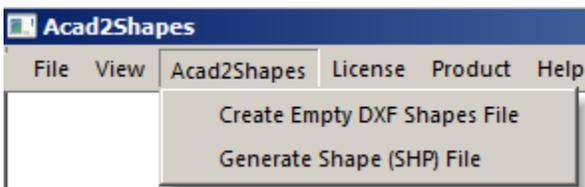NOTE: The Options dialog box is available by entering OPTIONS at AutoCAD command level.

Command: OPTIONS

The AutoCAD Options dialog box should look similar to the following after adding a path to the Acad2Shapes support folder:
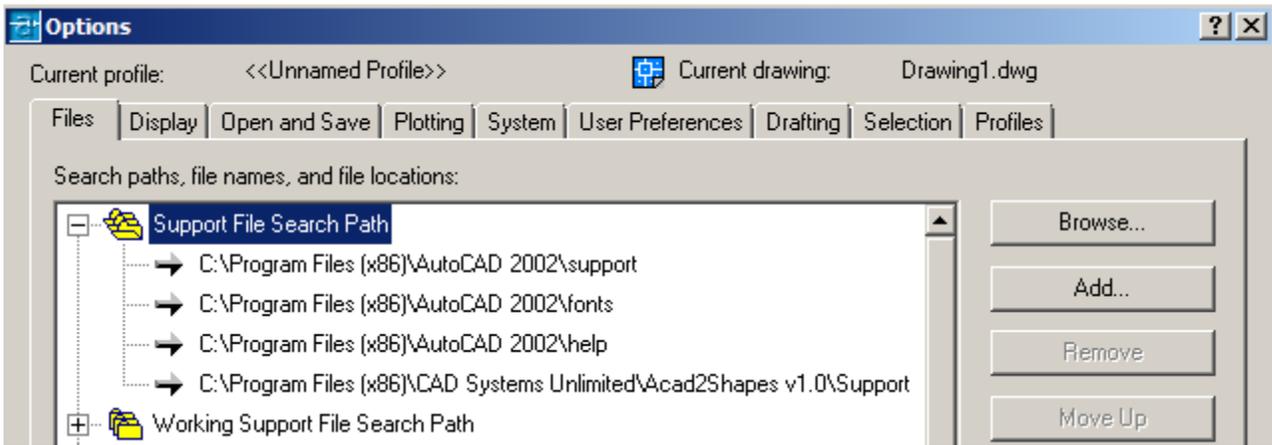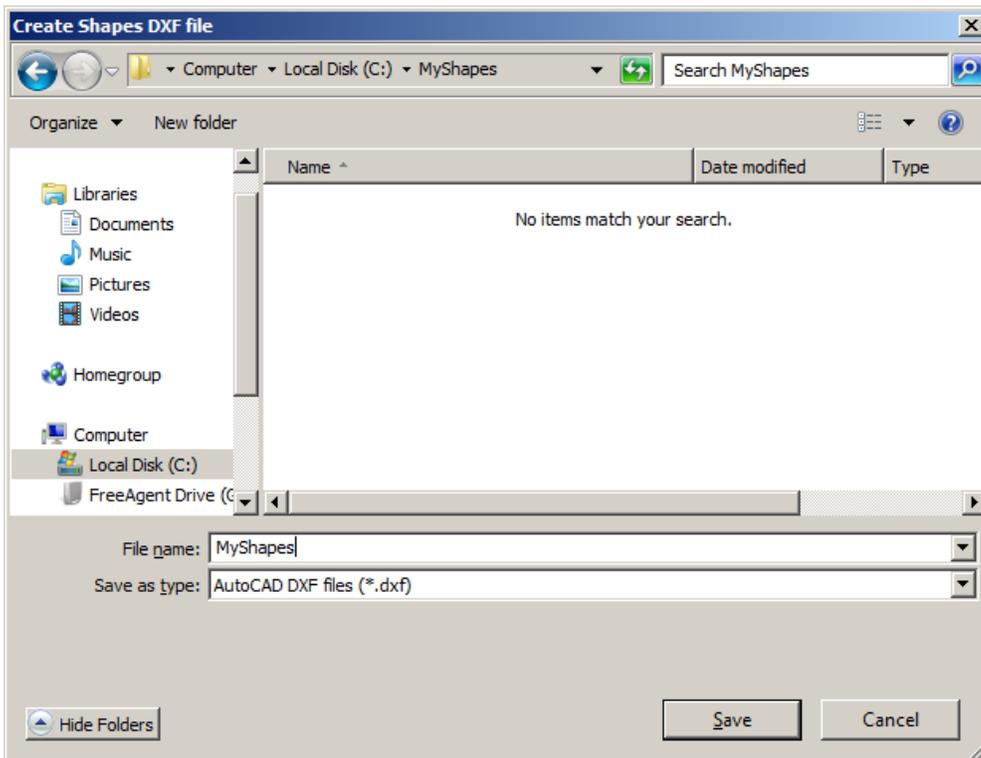
Acad2Shapes Program Execution

If you have not yet created a new DXF file for your shapes, run Acad2Shapes.exe from your start menu.
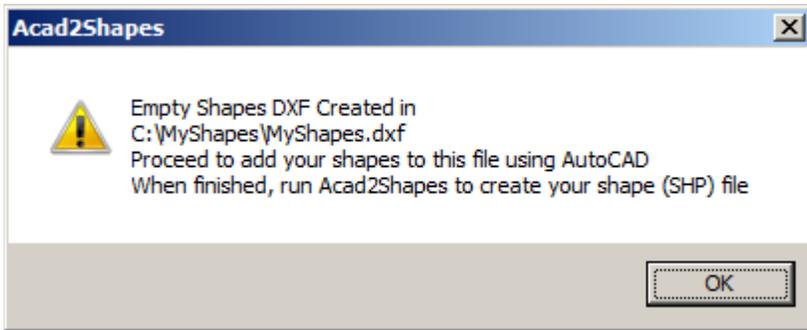

Click on "Create Empty DXF Shapes File"

Browse to a folder where you want the DXF file created and give it a name. In this example, you are creating a file called MyShapes.dxf in the MyShapes folder.

Click on Save.

Acad2Shapes will display the following message:

You are now ready to add shapes to this file

**Creating your shapes in AutoCAD**

Launch AutoCAD.

Open the shapes DXF file you have previously created to add shapes to it. In the examples below, you will be opening MyShapes.dxf which is included in the Acad2Shapes Sample Folder.

Enter Script at AutoCAD command level to load the Script file

Command: script

Browse to the folder:

C:\Program Files (x86)\CAD Systems Unlimited\Acad2Shapes v1.0\Support\
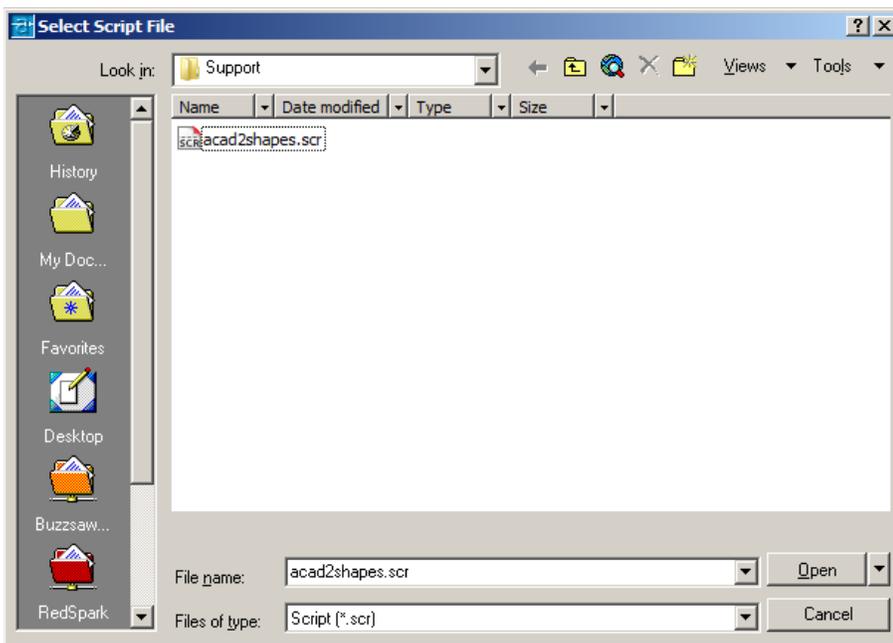
Choose acad2shapes.scr from the dialog box and click on Open.

Note: Next time around, you can run the script file from the History tab to the left of the dialog box.

This will load the AutoLisp acad2shapes.lsp file.

Command: script
Command: (load "acad2shapes.lsp")
Acad2Shapes Lisp Commands loaded.
Enter zbox to zoom into a shape box.
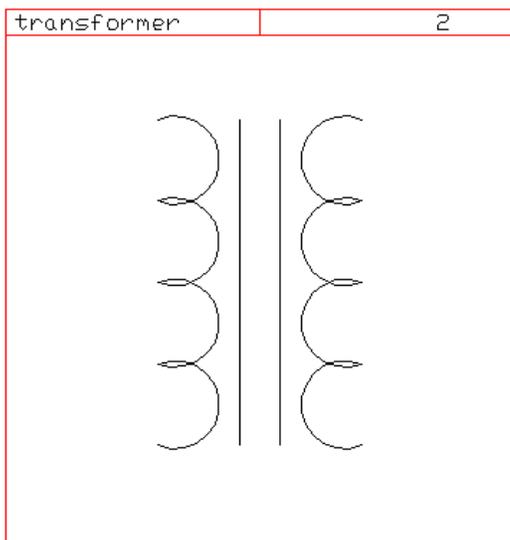Enter zname to zoom into the shape name area.

To work on particular shape, enter zbox at Command level:
Example:

Command: zbox Enter Shape Box Number (1 - 255)2

In this example, you will zoom in to shape box number 2 which has the Transformer shape you are creating or modifying.

NOTE: See below on how you can automatically load the acad2shapes.lsp file each time you run AutoCAD.

To add or change the shapename (in this case, *transformer*), enter zname at Command level

Command: zname Enter Shape Box Number (1 - 255)2

The zname command will zoom in to the upper left corner of the shape box where you can add or modify the shape name using AutoCAD standard Text.
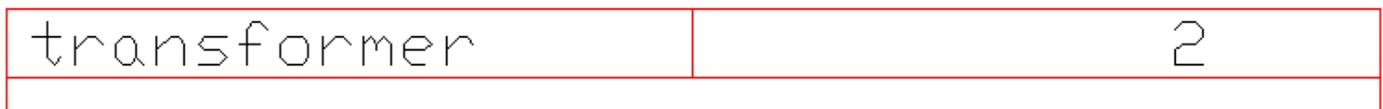

The shape name must be placed inside the rectangular box. The suggested text height is *three* drawing units. This will center the name vertically.

After adding and editing your shapes, **save** the DXF file. You can always go back to it to do more work.

Note: AutoCAD will always prompt you if you wish to save the DXF file in DWG format.

You may of course save the drawing in DWG format but you will still have to run the DXFOUT again to create a DXF file that Acad2Shapes can work with!
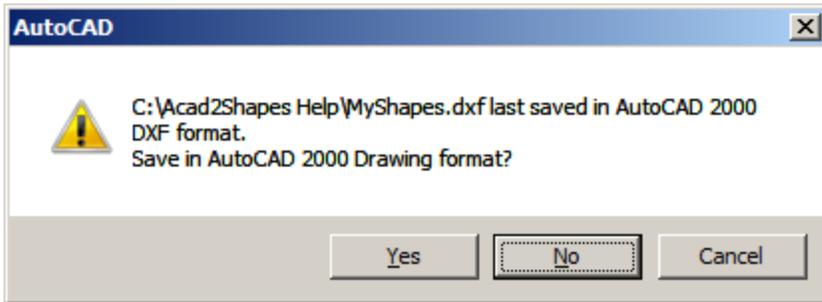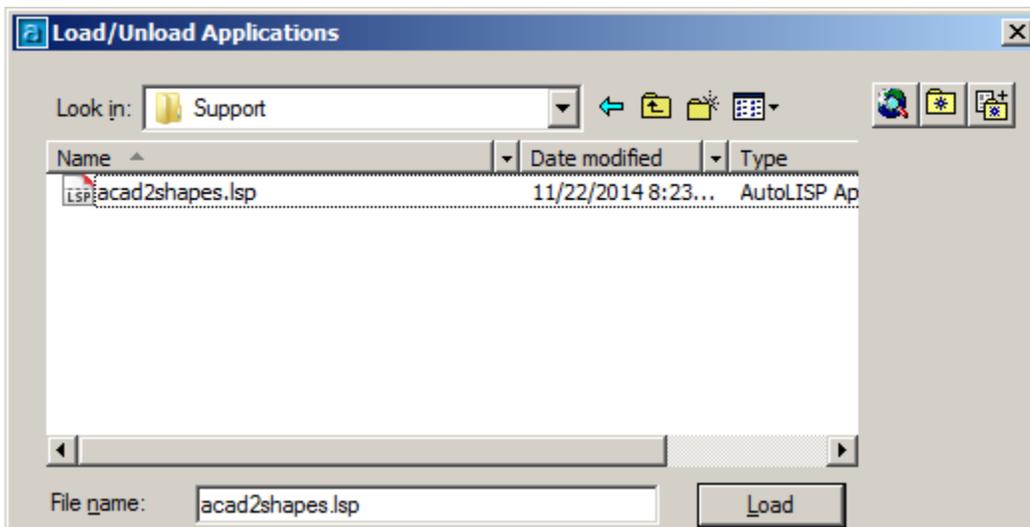

Suggestion: Enter No to this prompt!

Alternate method to loading the acad2shapes.lsp.

Instead of loading the lisp file from the script file, you may also use the appload command.
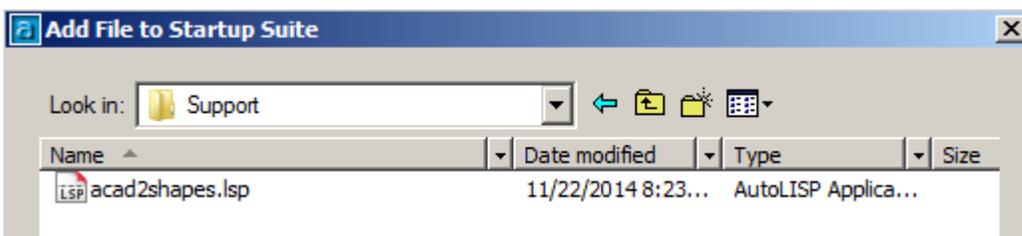Command: appload

Then load acad2shapes.lsp from the Load/Unload Applications Dialog Box

Automatic Loading of acad2shapes.lsp

You can load the acad2shapes.lsp file automatically when AutoCAD starts by adding the file to your Startup Suite. This is at the bottom right corner of your AutoCAD Load/Unload applications dialog box.

CREATING YOUR SHAPE

Zoom into the shape box for the shape you want to create using the zbox lisp command.

Set Snap On to a value of 1. The grid size is 100 x 100. This will create accurate shapes to a resolution of .01 inches if the shape will be inserted at a height of one inch!

Create your shape using LINES, ARCS, CIRCLES, ELLIPSES, POLYLINES, AND PLINES (LWPOLYLINES), and TEXT!

NOTE: The system variable PELLIPSE must be set to 1 before creating the ELLIPSE.

NOTE: When entering TEXT, use must use the AutoCAD Standard Text Font for proper registration and spacing with the shape box.

USING GEOMETRY FROM ANOTHER DRAWING

Open another drawing. Copy drawing entities from that drawing to the clipboard using the COPYCLIP command. Then PASTECLIP them into the shape box.

Blocks may be copied to the shape box but blocks MUST BE EXPLODED saving the DXF file. Exploding the blocks will allow Acad2Shapes to recognize its supported entities in the DXF file.

NOTE: Acad2Shapes will snap the start and end points of the copied entities into the shape box grid!

Do not forget to enter a shape name for your new shape using the *zname* autolisp command.

INSERTION POINT

By default, the insertion point of the shape is at the lower left corner of the shape box, If you wish to specify your custom insertion point, enter a POINT where you want the insertion point to be created.
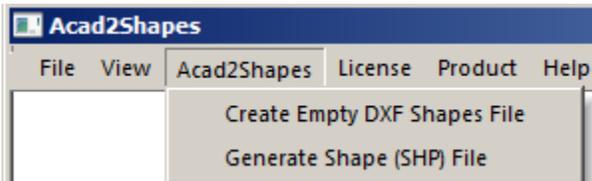
Examples, in the Sample file MyShapes.dxf, insertion points were specified for the circle and the babygrandpiano shapes.
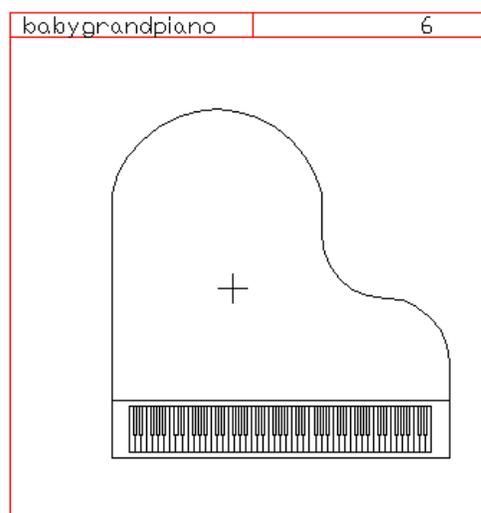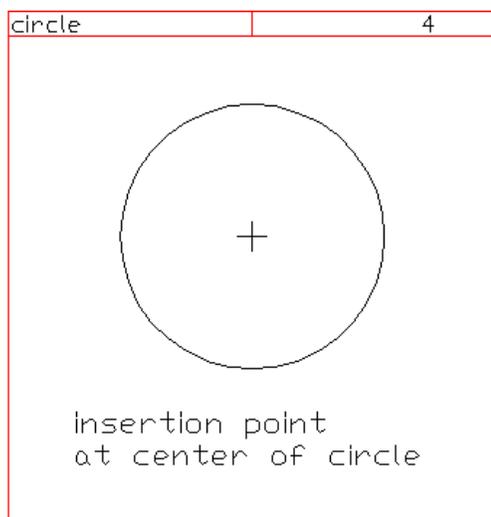
Generating your Shapes (SHP) file in Acad2Shapes

After you have saved the DXF file you are working on, run Acad2Shapes. A warning message is displayed is you are running on Demo Mode. Click OK to proceed to the Main menu.

Click on Generate Shape File.

Browse to the location of the DXF file you are working on and to the location of the ouput SHP file. By default, it will be the same location of the input file. Then click on Generate SHP File.
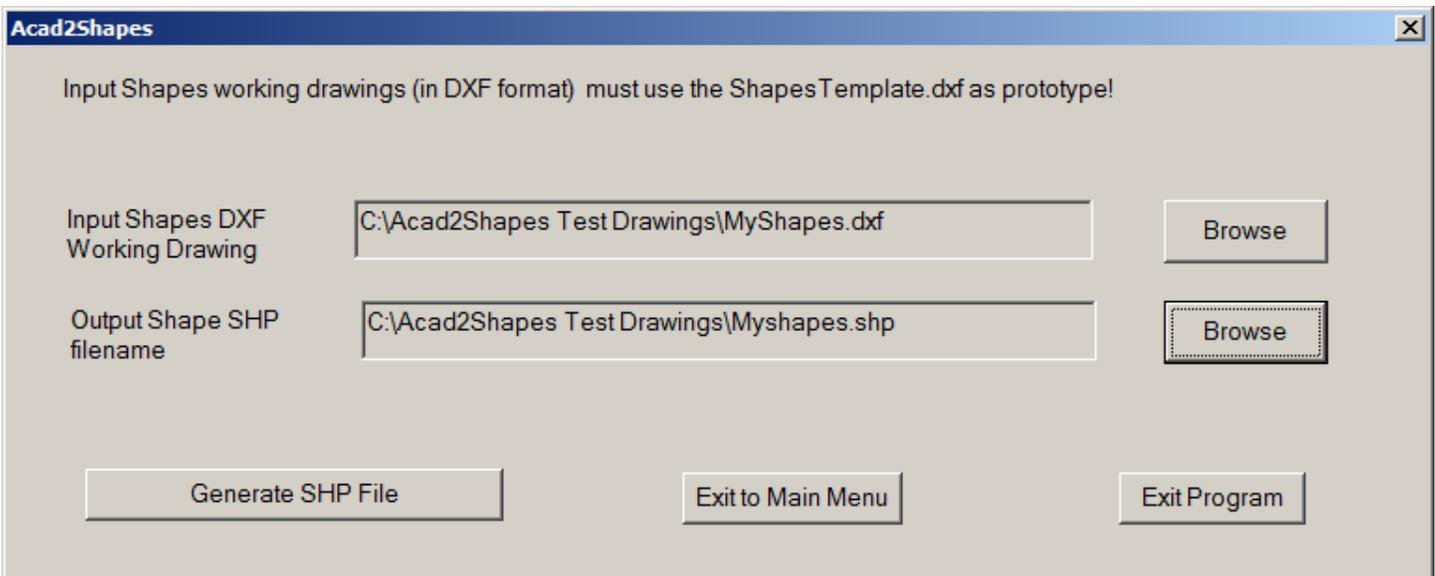
If the program encounters no errors, this message is displayed.
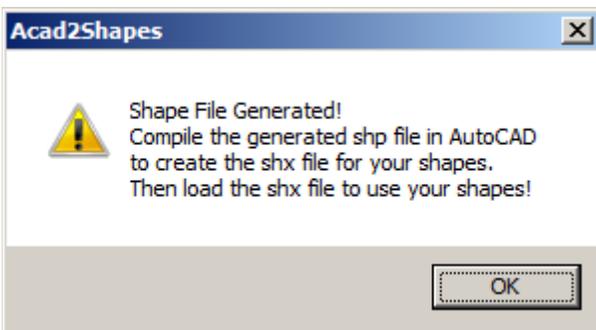
You can Exit the Program or go back to the Main Menu.

Proceed to compile your shape file in AutoCAD into an SHX file. You may then insert your new shapes using the SHAPE command.

Acad2Shapes ACCURACY

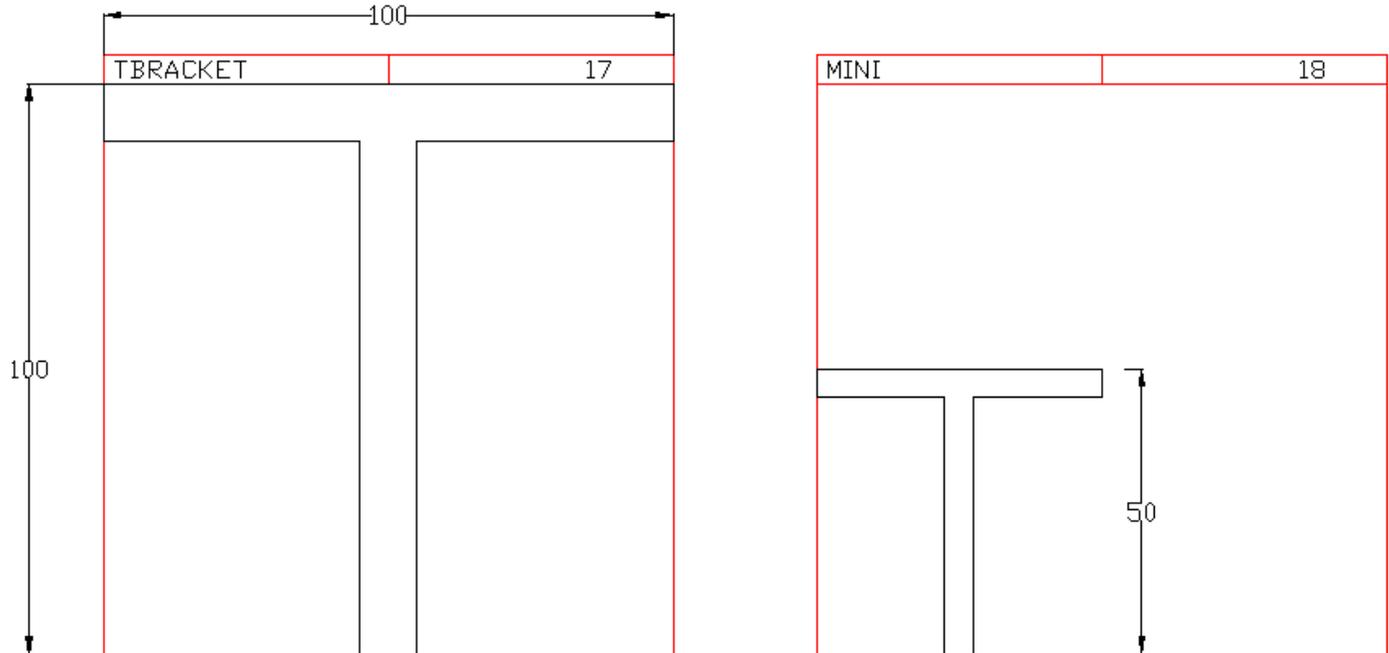The shape boxes are 100 by 100 grid points. The shape on the left uses the full height of the shape box of 100. When it is inserted into a drawing using a scale factor of 100, the height of the shape will be 1".   The accuracy of the entities defining shapes .01" when plotted at 1".

In the smaller shape to the right, the height of the shape is 50 grid points. At a scale of 100, the height of the shape will be ½ ".

This also shows how you can define relative scaling when you design your shapes using Acad2Shapes.

Main Menu Additional Functions
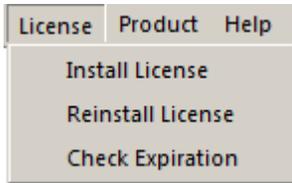
Install License
Installs the serial number and authorization of your purchased License.

Reinstall License
Reinstalls a License.

Check Expiration
Shows number days left till expiration of your License
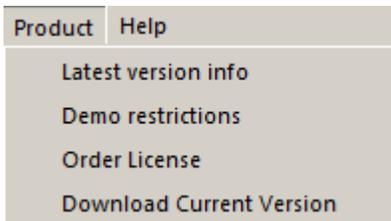
Latest version info
Connects to the website and shows latest version information

Demo restrictions
Shows difference between the Licensed version and the Demo version

Order License
Use this to order a License for Acad2Shapes

Download Current Version
Connects to the website to download the latest version

Frequently asked questions

Demo Restrictions
Q. How is the Licensed version different from the Demo Version

A. All shapes generated in shape boxes 2 thru 255 will have a small X marker at the top left of the shape. The X marker is not generated for the shape in box 1.
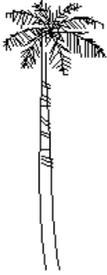
Maximum number of drawing entities

Q. What is the maximum number of drawing entities (total for all the shapes) can I place in a shape file?

A. The maximum number of drawing entities allowed by Acad2Shapes is 10,000 per shape file. A warning will be given when you approach this limit. If you need to do more shapes, create another shape file.

Maximum number of bytes per shape

Q. What is the maximum number of bytes for a single shape?

A. Two thousand bytes (2000 bytes). A warning message will be given as you approach this limit for a particular shape.

Maximum number of shapes

Q. What is the maximum number of shapes I can create with Acad2Shapes?

A. Two hundred fifty five (255) shapes. One for each shape box.

Default Shape Name
Q. What is the default shape name if I forgot to enter text in the upper left corner of the shape box?

A. The default shape name is SHAPEnnn where nnn is the shape number.

Cannot find SHAPES.SHX
Q. Missing Shapes.shx when I open a DXF file.

A. Add a path to the Acad2Shapes Support folder in your AutoCAD Search Path:
C:\Program Files (x86)\CAD Systems Unlimited\Acad2Shapes v1.0\Support\

Cannot find my SHX file

Q. I have generated a shape file but I cannot load the SHX file in AutoCAD.

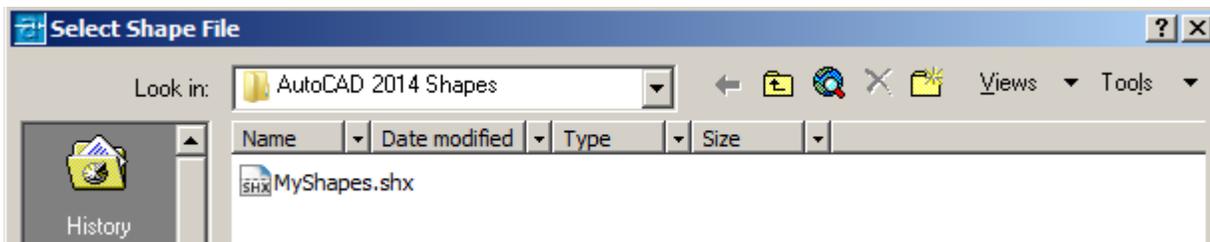A. You have to compile the SHP file you have created in Acad2Shapes before you can load it.
Command: COMPILE
This will create an SHX file for your shapes. You can now insert the desired shape using the SHAPE command.
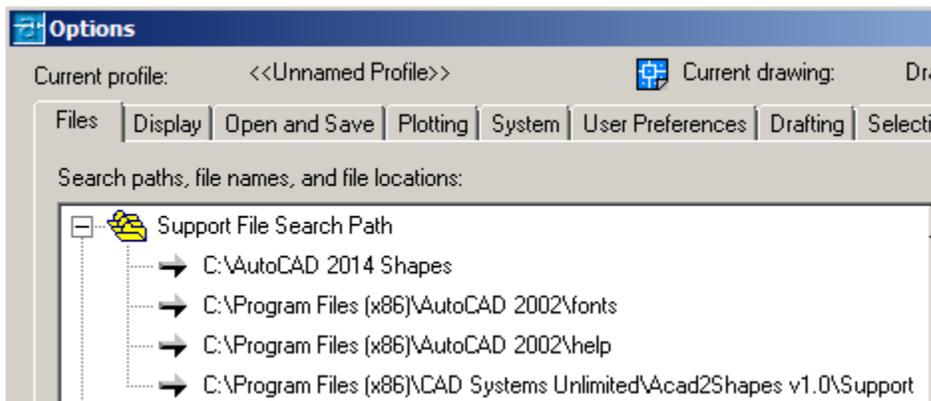
AutoCAD prompts for SHX file

Q. After opening a DXF or DWG file, AutoCAD prompts for location of the SHX file.

A. Browse to the location of your SHX files.

TIP: Create a folder to contain all your shapes files. Then Add the path to the AutoCAD Support File Search Path!   In the following example, the folder C:\AutoCAD 2014 Shapes contains all your shapes.

Shapes are missing or not updated
Q. I have generated a newer version of the shape file, but the new shapes are not available and the ones I modified have NOT been updated!

A. AutoCAD retains shapes that have previously been loaded! Close the drawing, and reload the new or modified shape file.

Font/Shape File Cannot exceed 64 characters

Q. Why do I get this message?

A. When opening a DXF file, I get this weird message. This intermittent error occurs when AutoCAD cannot find the SHX being used by the drawing. This normally happens when you move or copy the drawing from another computer. AutoCAD is looking for the SHX file in a path that is no longer available. If you have the file in your computer, add it to your shapes folder and add the path to your AutoCAD Search path.

If you want to know specifically what shape files are missing, open the DXF file in any text editor like NotePad and search for the file extension .shx.

Save in DWG format prompt

Q. AutoCAD keeps prompting me if I want to save the drawing in DWG format after closing the DXF file I am working on
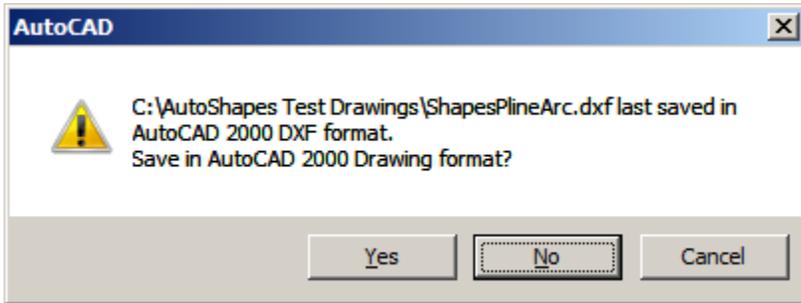
A. Reply NO. Otherwise, you will have to recreate the DXF using DXFOUT command again for use with Acad2Shapes.

Acad2Shapes accuracy

Q. Is Acad2Shapes accurate?
A. Yes. It is accurate to 100 by 100 grid points per shape box. When designing your shapes, make sure that SNAP Mode is ON and the spacing is set to 1. Acad2Shapes automatically snaps entities it supports to the nearest integer grid point. Circles will snap to its center and its radius. Arcs will snap to their start and end points. Lines will snap to start and end points. Polylines and light weight polylines will snap to their vertices

Shape number 256

Q. Are the contents of shape box 256 created in the generated SHP file?

A. No. This box is for internal use only

Invalid input DXF file

Q. Why is Acad2Shapes giving me this message?

A. You probably changed or deleted something in shape number 256. DO NOT CHANGE ANYTHING IN BOX 256 where the Acad2Shapes Copyright notice is.

License expiration

Q. My license has expired. What shall I do?

A. Acad2Shapes will automatically convert to Demo Mode when License expires. DO NOT use Acad2Shapes in Demo Mode to work on shapes files that you have previously created! Save all these to a separate folder. Otherwise, you may overwrite the production shape files with the demo version with the X marker at the top left of the shape! After licensing, you can continue to work on your previous shape files.

Spaces in shape names

Q. Can I have spaces in shape names?

A. Yes. But you have to enclosed the name in double quotation marks when inserting the shape!
For example: Command: shape Enter shape name or [?] "My Shape"

Expiration Days

Q. When I click on "Check Expiration", it shows 0 days.

A. While running in Demo Mode, expiration days will show zero days.

Ellipses are not being created

Q. I created ellipses in the shape box but they are not created.

A. Acad2Shapes supports ellipses. But the pellipse variable PELLIPSE has to be set to 1 before you create the ellipses! The default is 0.

Command: PELLIPSE

Enter new value for PELLIPSE <0>: 1

Setting the value of PELLIPSE to 1 tells AutoCAD to create POLYLINES for the ellipse. Acad2Shapes supports POLYLINES.

ESRI Shape Files

Q. Are AutoCAD shape files the same as ESRI shape files?

A. No. These shape files have a totally different format and are used by the Environmental Systems Research Institute, Inc. (ESRI) software.