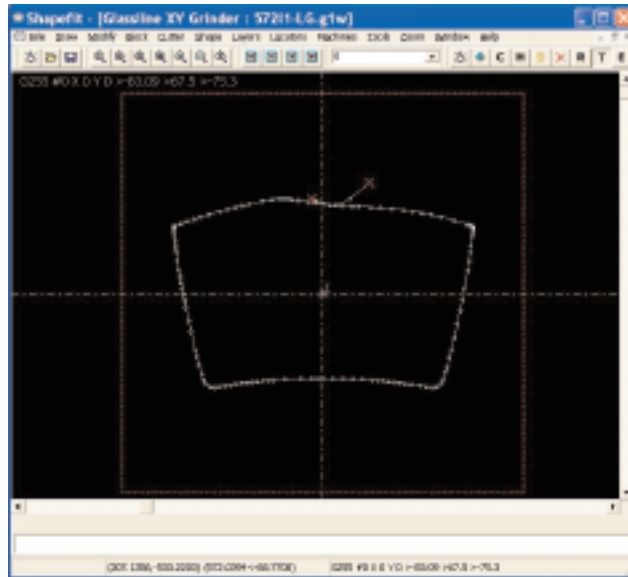


Glassline Shapefit for Windows



Glassline Shapefit for Windows 2-D CAD Package – Standard Program Screen

Shapefit for Windows is a 2-D CAD package, used for the creation of G-Code files for CNC machines. Shapefit comes in four varieties, Lite, Standard, Nest optimized, and Nest Optimized with order management. A demo version is also available, which is a full version except does not allow saving files or outputting G-code.

Common Shapefit features include:

- ▶ DXF import and export
- ▶ Configurable for multiple CNC machine support. Charges may apply.
- ▶ Easy to output G-Code. Select the machine and press output.
- ▶ Curve Fitting - converts a series of digitized straight lines into a series of lines and arcs. The conversion creates a shape that optimizes the number of segments and insures that every segment is tangent without changing the position of the digitized points.
- ▶ Layer based -
 - Each layer can be used for a different machine for the same shape
 - Different layers can be different shapes for nest cutting
 - Layers can be turned on and off for G-Code output
 - Each layer has its own block, which is used for generating relief cuts, and nest cutting layout.
 - Layers can be ordered to select the cut order for nested programs.
- ▶ Configurable locator system for use with Glassline locator tables.

WinShape Lite

WinShape Lite is the minimal package for creating G-Code files. The shapes cannot be edited, but DXF files can be imported and the output to G-Code. This system offers the bare minimum to setup a part for a variety of machines.

- ▶ DXF import only, no export capabilities
- ▶ Ability to Save to Shapefit file formats
- ▶ Edit commands include: Move, Reverse, Rotate, and Start Point

WinShape 2.0

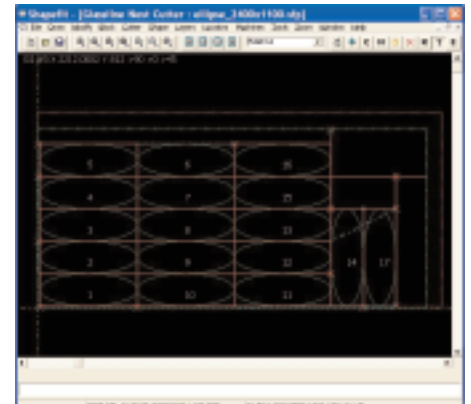
The Standard version has every thing for editing shapes. However, nest file creation must be done manually, i.e. moving shapes to locations within the block via click and drag.

- ▶ Draw commands include - Fillet, Loop, Insert, and Midpoint.
- ▶ Modify commands include - Delete, Edit, Mirror, Move, Offset, Reverse, Rotate, Scale, and Start Point.
- ▶ Cutter Commands include - Tool Up/Down and Relief Cut.
- ▶ Every point can have an M-code and a feed rate manually set.
- ▶ Expandable Shape Library - including a series of standard shapes that are based off of parameters (For example a rectangle is generated by entering the height and width)
 - Includes a variety of rectangles, circles, triangles, trapezoids, polygons
 - Expandable by copying and modifying the existing “.stl” files (can be done by Glassline or the customer)

WinShape NestOpt

The Nest-Optimized version of WinShape 2.0 includes the standard version as well as options for automating the creation of nest cutting files.

- ▶ Parts are optimized to fill the raw sheet size
- ▶ Parts can be rotated automatically
- ▶ Relief cuts are added automatically
- ▶ Nest parameters include - alignment (Top Left, Bottom Right, etc), auto-rotation, re-merging scrap areas, minimum amount of breakable trim, and an auto Relief-cut direction control
- ▶ Once created the nested sheet can be manually edited



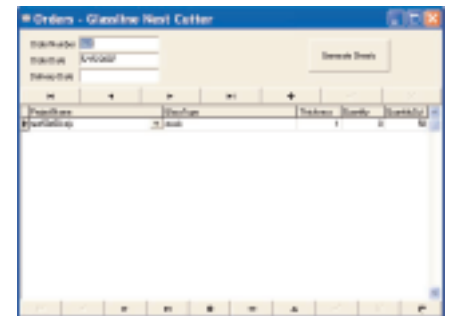
WinShape Order Management

The Order Management version has all the features of WinShape 2.0 and NestOpt, and includes a data-base for tracking glass inventory, and order entry. It can be used to automatically create the cut sheets for all the orders, based on glass material, thickness, order number, and materials on hand.

The Nest generation can process a single order or all open orders. A cut sheet is created for each sheet needed to fill the order up to what is available in inventory. Material used is automatically removed from inventory, and the quantity and quantity cut is updated in each order.

Tables include

- ▶ Glass Types - all of the different types of glass used
- ▶ Glass Inventory - all of the glass on hand, listing the material, size, thickness, and quantity of each glass in inventory
- ▶ Projects - the list of all the different part shapes
- ▶ Orders
 - Each order has an order number, order date, ship date and list of order items
 - Each order item has the part shape, glass type, glass thickness, and quantity to be cut



GLASSLINE

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