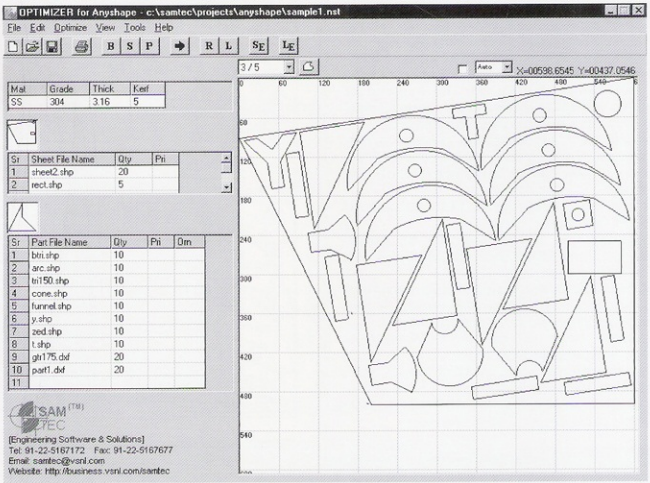
OPTIMIZER™ for Anyshape

MEN, MATERIAL, METHOD, MONEY - are the basic factors of any production process, which play a crucial role in determining the profitability of the organization. Modern day business, which has become fiercely competitive, calls for continuous improvisation in the techniques of production with regards to these productive factors.

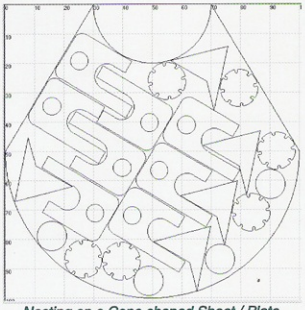
OPTIMIZER™ for Anyshape is the most powerful true profile nesting software for Gas/Plasma/Oxyfuel/Laser cutting that will automatically optimize the placement of parts / profiles, on rectangular or non-rectangular sheets / plates of any raw material, including sheet metal, fabrics, leather, wood, etc. in order to minimize material wastage.



User friendly interface with seamless integration of modules

The input sheets / plates as well as Parts can be rectangular or non-rectangular i.e. circle / polygon / triangle virtually any shape imaginable with notches and cavities within them.

Used sheets / plates (parts removed) can be saved for future use.



Nesting on a Cone shaped Sheet / Plate.

OPTIMIZER™ for Anyshape is a fully automatic True Random Shape Nesting Package, implying that it takes into consideration actual shape geometry, rather than treating each shape as rectangular block and laying them side by side.

Optimization for multiple jobs having different input sheets / plates and output parts of variable shapes is done within seconds with a high level of accuracy and maximum efficiency, leaving manual profile nesting methods far behind.

Unique and powerful nesting algorithms, Parts stacking, rotation, priority, filler parts, with flexible input and editing features including manual nesting and many such features make ***OPTIMIZER™ for Anyshape*** the most powerful, cost-effective nesting software available to production fabricators and manufacturing operations. It encourages users to innovate improvements in the entire manufacturing process by providing immediate feedback on material utilization and yield.

SAMTEC Solutions (P) Limited
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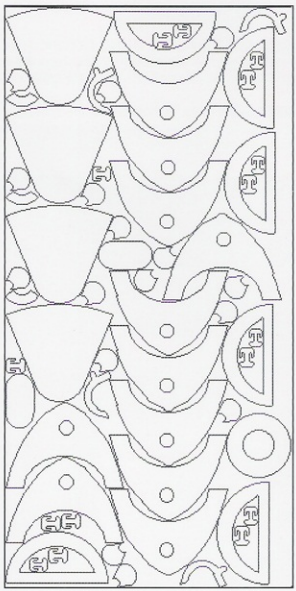
Technical Features

- **Variable Shapes**: Supports nesting on different varieties of rectangular or non-rectangular Sheets / Plates. Sheets / Plates as well as Parts can have cavities and notches within them.
- **Nesting options:** Provides three different nesting options viz. **Stack Nesting, Continuous Stack Nesting and Free Nesting** to suit individual needs.
- **Stacking:** Stacking of similar Parts and nesting within the interiors of stacked Parts further reduces material wastage.
- **Nesting within cavities:** Small Parts are nested inside larger Parts that have cavities or holes inside them.
- **Part Rotation**: ***OPTIMIZER™ for Anyshape*** decides the best rotation angle for Parts to minimize the Part region for better yield. Rotation can be restricted for Parts that require a specific grain direction.
- **Priority:** decides the sequence in which the various Sheets / Plates are to be utilized and Parts are to be produced. This is useful for specifying those, which are of immediate requirement, in case the input sheets are limited or insufficient to satisfy the given requirement.
- **Reuse of Sheets:** ***OPTIMIZER™ for Anyshape*** provides a fully automatic feature of nesting on off-cut(s) / used Sheets / Plates (Parts removed). Unused Sheets / Plates can be saved automatically and reused in subsequent projects.
- **Multi-Job**: A number of jobs can be combined for better utilization of material and other productive resources.
- **Auto-Cad Support:** Auto-Cad files (.DXF Files) can be directly imported for Sheet / Plate and Parts. Modification of .DXF files is also possible using the built-in **Shape Editor**.
- **Shape Editor:** The built-in **Shape Editor** facilitates quick creation of shapes with desired dimensions and minimum keystrokes. It also consists of a **Shape Library,** which stores all the common shapes.
- The built-in **Layout Editor** helps in manual modification of automatically nested Layouts as per individual needs.
- **Report:** Generates a comprehensive report detailing overall Yield, Sheets utilized, Parts produced along with their weights.
- **Density Table:** is provided for storing the densities of different materials used for calculation of weight of the Sheets / Plates and Parts.



Sample layout showing stacking, filler Parts nesting within interiors and cavities

Basic Advantages

- ***Cost:-***
  - Cost reduction due to the decrease of waste in prime Sheets / Plates, which means more orders, can be executed with the same amount of material.
  - Reuse of Sheets / Plates (Parts removed) or off-cuts nesting.
  - Substantial time and error reduction in cutting layout preparation.
- ***Purchase:-***
  - ***OPTIMIZER™ for Anyshape*** provides you the best possible combination of the different input Sheets / Plates based on the required Parts. This helps production personnel to order required input Sheet(s) / Plates along with their respective quantities.
- ***Estimation:-***
  - When you are quoting to your customers, ***OPTIMIZER™ for Anyshape*** provides the exact raw material needed for the given requirements. This makes estimate more realistic.
- ***Planning:-***
  - ***OPTIMIZER™ for Anyshape*** proves to be a great asset while combining a number of production jobs at a time. This helps in achieving even more material saving.

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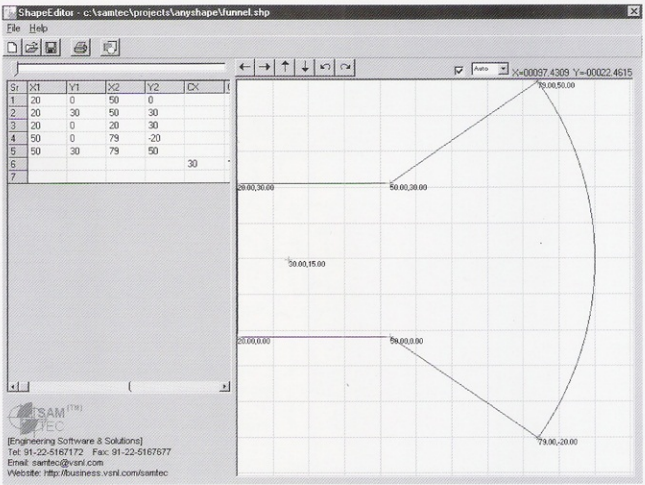
Shape Editor

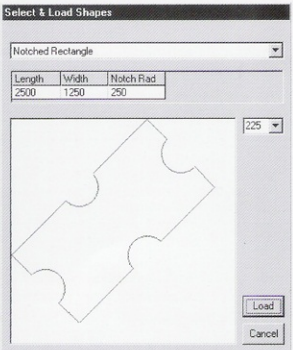
The Shape Editor is basically used to create shape / profiles for Sheet / Plates and Parts with the required dimensions. It provides an extremely simple way of generating profiles, with minimum keystrokes and mouse clicks.



A funnel shaped profile created in the Shape Editor using Lines and Arc

Technical Features

- Any shape can be defined within moments, with a minimum number of inputs using only the line and arc conventions of basic geometry. For e.g. a circle of 50 radius can be defined by simply typing 50 in the radius field.
- Consists of a **Shape Library** for common Shapes, viz. circle, rectangle, polygon etc., from where existing shapes can be selected and modified as per the required values. An out-to-out dimension of profile is provided, by simply placing the mouse pointer over it.
- Auto-Cad (.DXF) files also can be opened and modified in **Shape Editor.**
- Instant generation of Shapes / Profiles of the Sheet / Parts with the dimensions to scale, on the entry of the details.
- A simultaneous visual view of the profile, helps in correction of errors / deviations from actual profile, at the time of creation, which means that it is not necessary to wait till the complete profile definition is over, for rectification of errors.
- Facility to move and rotate profiles at different angles, using the movement control toolbar. Movement & rotation of individual entities i.e. line and arc is also supported.
- Grid lines guide through the generation of profiles.
- It does away with all the technicalities and rigidities of highly sophisticated designing software.



A rectangular profile with notches defined in Shape Library using 3 input values

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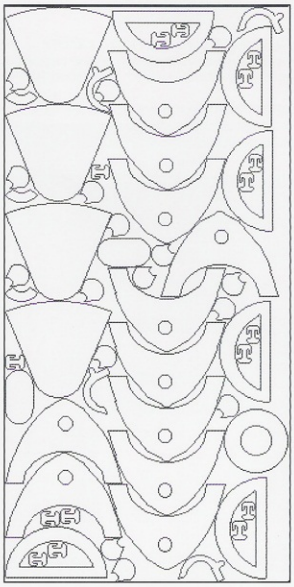

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