LS5 Laser Solution

- Fully integrated 5-axis programming
- 5-Axis Real Time Simulation
- 3D Fixture Making
- 3D Sheet Metal CAD + Unfolding
- DNC Communication
- Simple Nesting
- 2D + 3D CAM
- 2D CAD

Real-time simulator with highly optimized graphical drivers simulate smooth machine motion on standard PC hardware, even with its high fidelity machine models. DiamondSoft uses the fastest and most accurate collision checking system in the industry to completely validate cutting and traverse paths.
• **Real Time Simulation and correction**

  Machine motion is simulated in real time with smooth movement.

  Positioning traverse moves between openings are displayed.

  Editing and simulation of edited points are easily handled with control windows.

  Collision checking traverse moves and machine limits are monitored and displayed to alert you of problems you may have when processing.

• **Processing Vector control**

  Vector align and adjustment tools allow automatic straight or tapered cutting of any opening.

  Each axis can be adjusted and aligned to any position while monitoring for collision during positioning or cutting.

**Unconstrained Tooling for all 5-axes**

Full control of Pierce, Power Leadline, dwell, tabs, offsets, etc.

Place Tooling on planes, patches, and all NURBS surfaces.
Creating parts for design or laser cutting has never been easier. Easy navigation by using a wheel mouse and the Birds Eye View window greatly speeds up drafting time. Intelligent sheet metal creation tools in DiamondSoft make adding notches, chamfers and keyways to your designs a breeze.

- **Drop Common Shapes into place**
  Drop common cutting and punching shapes and arrays are easily dropped into position using the Shape Maker tool for quick part creation. Array patterns are also quickly set up using the 6 preset patterns.

- **TrueType Font Vectorizer**
  Import any TrueType font for cutting or etching. No secondary conversion needed.

- **Duct Shapes**
  Powerful automatic unfolding of built-in duct patterns ready cutting. 99 Common Duct patterns created to your specifications using parametric variables.

- **DNC Communications**
  Upload / Download single or multiple programs from PC to NC Controller.

  Search the NC controller for programs in a range of program numbers.

  Manage programs in the laser's NC Control from your PC.
• **DWG - DXF + IGES IMPORT CLEANUP**

  Quickly Clean-up and mark problems in AutoCAD DWG, DXF and IGES files as you Import.

  Repair minor problems in bad geometry as you import files from customers such as remove duplicate lines and connect open lines.

  Shape recognition, convert blocks of parts into an array, Vectorize imported text for etching or cutting.

• **CAD ERRORS MARKED AS YOU IMPORT.**

  Automatic marking of problem geometry

• **THUMBNAIL MENUS:**

  Make part identification quick and easy

• **LINKED SHAPES**

  Copied and mirrored shapes are linked for quick global editing
3D Sheet Metal Modeler

- **Native Sheet Metal Modeler**
  Not a solid surface or wire-frame modeler.

- **Exact Rendering**
  Displays bend/cut edges, relief cuts exactly.

- **Sheet Metal Intrinsic Operations**
  Bend edge, cut edge, flip thickness, change thickness

- **Tight Integration with 2D Drawing Editor**
  Sketch holes and openings on any plane using all of the 2D tools
• **Planes, patches**
  Develope curved surfaces and arbitrary NURBS surfaces

• **Box making**
  Common shape profile library

• **Construction Planes**

• **Real-time Unfolding Preview**

• **Lips, Lofts, and Surfaces of Revolution**

• **Full 3D Dimensioning**

• **Editing:** Trim, Extend

• **Transformations:**
  Move, Copy, Rotate, Mirror, Stretch

• **Advanced construction:**
  2-shape blend, edge loft, node loft

• **Advanced editing:**
  Corner cleanup, 3D fillets, hole projection, spherical caps

• **Auto Orthographic views from 3D model**
  Automatically create Top, Front and Right side views with just a click

• **Bending database**
  Bending Database include hemming and cut edge allowances that ensure accurate part construction and unfolding

• **Point & Click Flanges**
  Normal, Weld flange, Hem flange, Curved flange
3D Fixture Making Feature

- **Quickly create fixtures for your formed parts from your 3D CAD data.**

  In one integrated system you can quickly generate fixtures that match your CAD part and create an NC program to cut both the part and the fixture.

- **Automatic Fixture Layout**

  Fixtures are automatically laid out and marked in a flat pattern ready for cutting.

  Interlocking slot design makes jig easy to assembly support parts are marked for quick and easy assembly.
3D Fixture Making Feature

Interlocking slot design makes jig easy to assemble; support parts are marked for quick and easy assembly.

Supports thickness can be adjusted so that they can be made from any thickness you choose.

Powerful feature control allows you to easily make a fixture in almost any configuration.

Hardware Requirements

Minimum Requirements
PC with Pentium 300 MHz or higher processor
Microsoft Windows NT 4.0 with Service Pack 4 or later
Microsoft Windows 2000 or 2000 Professional
Microsoft Windows XP Home or Professional
Microsoft Internet Explorer 4.01 or later
128MB Ram
200MB of available hard-disk space for program and additional space for drawings and NC files
CD-ROM drive
Parallel port or USB port for software protection block *(USB port is not supported by Windows NT4.0)*

Recommended
PC with Pentium III class (1GHz or higher)
Microsoft Windows XP Professional
Microsoft Internet Explorer 6.0 or later
512MB Ram
2GB of available hard-disk space (200MB for program and additional space for drawings and NC files)
3D accelerated graphics card with 32MB RAM
Parallel port or USB port for software protection block *(USB port is not supported by Windows NT4.0)*