Ashlar-Vellum Channel Partner Newsletter
January 2008

Cobalt™, Xenon™ & Argon™ v8 Released on Windows

Cobalt, Xenon and Argon version 8 for WINDOWS is now released and is being posted to the website for immediate download. To download the released version, go to www.ashlar.com/v8.

Customers will be notified via email over the next few days.

We continue to make progress on the release of the Mac Power PC and Intel versions, which should be ready later this quarter.

New Hot Topics & FAQs

The web team is in the process of adding some new pages to our site called Hot Topics and FAQs. There you'll find information about a number of industry issues that relate to Ashlar-Vellum software. These issues include:

- Does Ashlar-Vellum software work on the Intel Mac?
- Does Cobalt, Xenon or Argon do Sheet Metal?
- Does Ashlar-Vellum Software Support Die and Box Design?
- When will Ashlar-Vellum Import Autodesk's DWF file format?

- Does Ashlar-Vellum software run on Vista?
- Does Ashlar-Vellum software run on Leopard?
- Does Ashlar-Vellum Support FEA?
- Does Ashlar-Vellum support Computer-aided Manufacturing (CAM) software?
- Why can't Graphite™ v8 read my AutoCAD file?
- I want to run my old Vellum software on my new operating system.

The text for some of these topics is previewed in today's newsletter. Read on then check it out on the web in a few days.

Support for Die and Box Design

There are three options for creating die cuts using software based on Ashlar-Vellum Graphite technology. All of them support both Mac and Windows.

The first option is to use Graphite plus the Box Library from Rules Software.

See:

http://www.rulessoftware.com/

The Box Library is not individually listed on their website but can be purchased for about US$895 by contacting Rules. This option is good for creating die lines for die cuts to drive a sample table or can be processed through die design software to layout the steel cutting rule, etc.

The second option is to use Box Vellum Graphite by Comnet in Japan.

COMNET
Each and every effort for our customers!

See:
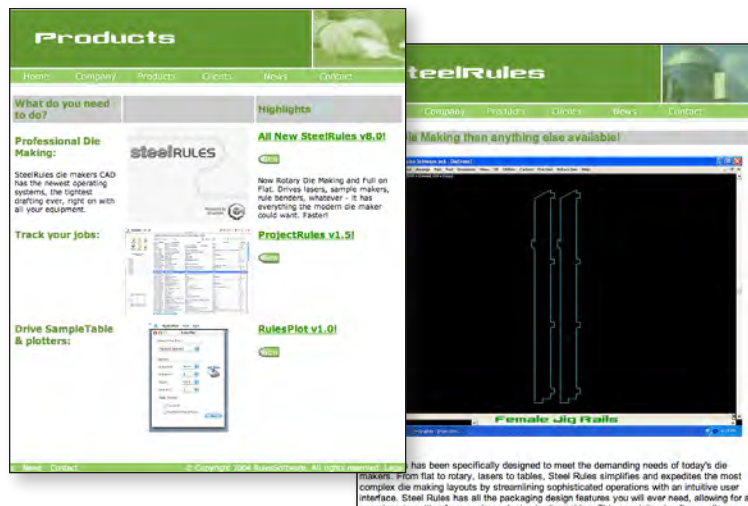
http://c11cjyl0.securesites.net/eng/bvg5.html

This uses a special version of Graphite, a box library, plus some special features for box design.

The third option is to use SteelRules, also by Rules Software (see above).

See:

http://www.rulessoftware.com/ProductsPages/Products.html

SteelRules is based on a special version of Graphite with additional features for full box and die design.

Reading AutoCAD's DWF Files

Please bear in mind that Autodesk invented the DWF format as a non-editable format to view an AutoCAD file. Anyone who creates a DWF file does so with the express purpose of preventing its import into other systems to edit or change the file.

DWF is Autodesk's own PDF, so to speak. It is an imprecise format that gives an exact visual representation but intentionally does not provide precision geometry.

Since there are always hackers who want to crack file formats, just for the sheer challenge of doing so, it is possible to find programs cracking DWF to DXF.

There are legitimate file viewers to see DWF files available on both Mac and Windows.

For Mac:

http://www.macdwf.com/

For Windows:

http://www.autodesk.com/designreview

Does Cobalt, Xenon or Argon do Sheet Metal?

While the current versions of Cobalt, Xenon and Argon do not have specific sheet metal commands, thousands of sheet metal designs are created every year in Ashlar-Vellum products.

It's true that several of our competitors have specific "sheet metal" commands. In reality, these not only limit your design approach, they merely create a "pseudo" flat pattern, which will be deleted or adjusted for by the professional sheeting metal software necessary to actually run the final manufacturing job. This is not due to an error in their software but rather to the impossibility of knowing the exact machine requirements. Specific machine variables require adjustments to bend allowances, set backs, reliefs, radii, etc.

Using Cobalt, Xenon or Argon you would instead do this:

1. Simply use any of our standard tools to create the final form of the part desired.

2. Use sharp corners rather than rounded or bent ones.

3. Apply a blend or radius to the inside of the corners and then to the outside.

4. Leave out the tabs for strain relief or create them using the standard cut out tools.

5. Then transfer the 3D model to any professional sheet metal software, such as any of those listed in the box below, which will prepare it for manufacturing by:

    • Designating which is the controlling surface in terms of bending.

    • Deleting all non-controlling surfaces leaving only the shell.

    • Replacing all bends with appropriate breaks.

    • Replacing all strain relief notches with their own notches.

    • Selecting the appropriate bend compensation and strain relief to specifically account for the following at the time the job is run:

        o The specific metal stock on hand.

        o The temperature of all things involved.

        o The specific tools on hand.

        o The speed of the machines on that day.

        o The idiosyncrasies of the particular machine.

6. After all of the above are accounted for, then the appropriate, flat, sheet metal pattern is generated by the professional sheet metal product.
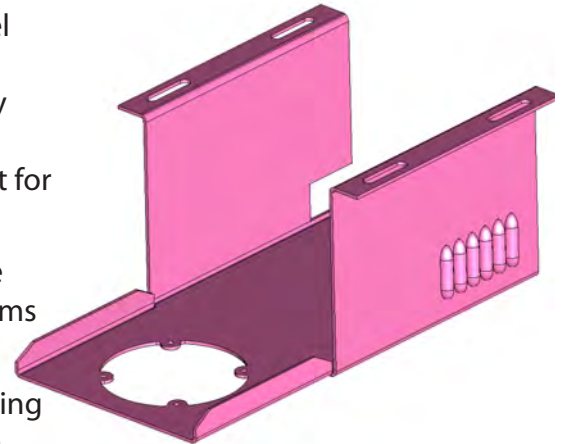
Since the professionals running the machines are always going to adjust for their equipment and stock, it is much better to simply design the part you want in the end and leave the actual sheet metal layout to the them. Even if everything could be designated at the time of design, it is impossible to compensate for specific manufacturing variables which change daily on the shop floor.

The Ashlar-Vellum product management team is considering how best to add further support for sheet metal design in future versions of the software.

Professional Sheet Metal Software Providers
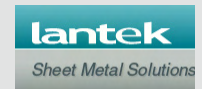
Does Ashlar-Vellum Support FEA?

Ashlar-Vellum exports data to any number of Finite Element Analysis (FEA) programs. The issue is getting the data to the target program.

Graphite exports to 2D FEA programs using DXF or IGES. These FEA programs mesh the drawings themselves, breaking the geometry into tiny triangles and squares.

Cobalt, Xenon and Argon export to 2D or 3D FEA programs. The data can be handled in these FEA programs any of three ways:

1. A 3D model created in Cobalt, Xenon or Argon can be brought into the FEA program as a solid model in kernel format, such as ACIS SAT or Unigraphics X_T, and the FEA program creates the mesh directly on the solid model.

2. A Cobalt, Xenon or Argon file can be brought in as a neutral or industry-standard 3D file, such as STEP or IGES, and the FEA program creates the mesh on the data.
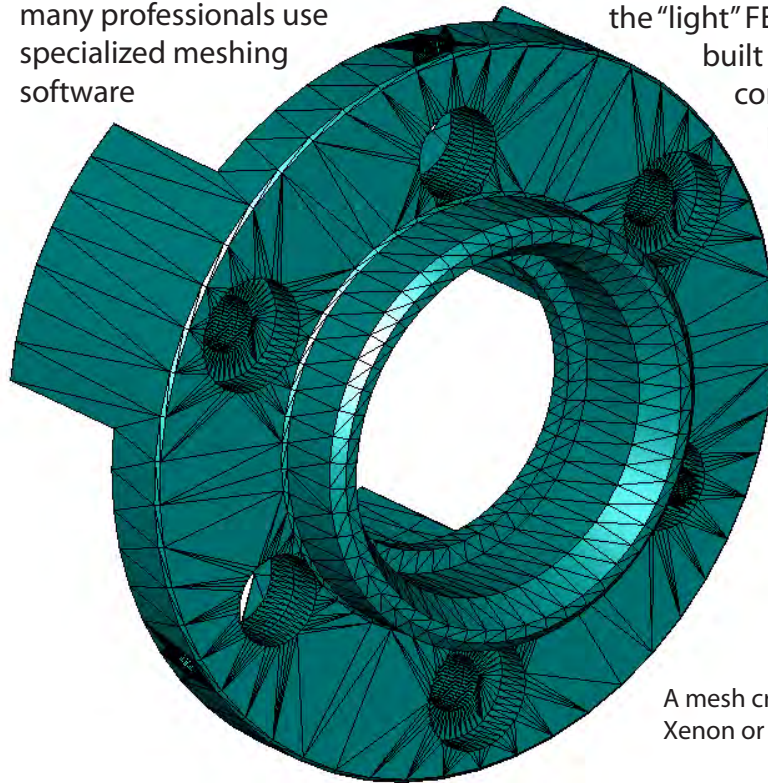
3. A mesh file is created in Cobalt, Xenon or Argon and exported as a DXF or STL file.

Exporting an already meshed drawing can assure acceptance, but letting the FEA software do the meshing allows customized resolution and adaptive meshing. The intricacies of meshing are so important that many professionals use specialized meshing software

costing upwards of $30,000. The process runs Design->Mesh ->Analyze.

FEA tools should be used by professionals trained in the strengths and weaknesses of various meshing and analysis technologies. FEA is a serious science best left to professionals using something more than the "light" FEA features built into some competitive CAD packages.

A mesh created in Cobalt, Xenon or Argon.

Ashlar-Vellum on Wikipedia

The web team is currently working on a Wikipedia entry for Ashlar-Vellum. Give us a few more days to complete the first round then check it out at http://en.wikipedia.org/wiki/Ashlar-Vellum.