

MACHINE DESIGN

JUNE 8, 2006
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A Penton Publication

SOFTWARE REVIEW

Design and draft on Macintosh computers

CAD software for Macintosh computers is perhaps a bit unusual. But the flexibility and elegance of VersaCAD for Mac has made it my premier design tool for over 20 years. The program creates 2D drawings including floor plans, elevations, electrical schematics, and plant layouts, as well as drawings of mechanical components. Version 2005 also comes with a starter 3D program that takes files and extrudes them to 3D. I use VersaCAD on an iBook with OS X to design factories and machines for processing macadamia nuts and chocolate.

The program includes many features that help keep design tasks simple. First and foremost is the 64-bit, floating-point precision that allows complex geometry. In fact, the software makes it exceptionally easy to make precise drawings. A parallel-line feature, for instance, lets users place a new line relative to the location of an existing one. And multiline functions handle drawing up to 200 parallel lines at a time, and clean up corners. A trim feature gives perfect line termination.

Edited by Leslie Gordon

The image displays two screenshots of the VersaCAD software interface. The top screenshot shows a plant layout drawing with various tanks and piping, overlaid with a 'Flow' symbol palette. The bottom screenshot shows a detailed mechanical drawing of a 'Ball Valve' assembly with dimensions and a 'mech2' symbol palette. A 'Properties' dialog box is open over the drawing, showing settings for color, style, level, and input mode. A 'Messages' window is also visible at the top of the interface.

VersaCAD for Mac makes it easy to experiment with different plant layouts to optimize manufacturing processes.

The software makes short work of designing and drawing mechanical components, such as valve assemblies.

QTY	DESCRIPTION
1	BODY
2	ENDCAP
2	BODY O-RING #2-104 (VITON)
1	BALL
1	STEM ASSEMBLY
2	STEM O-RING #2-111 (VITON)
1	THRUST WASHER (KEL-F)
2	"ST" SEALS (TPE)
4	1/4"-20NC X 3" RHCS (S.S.)
4	1/4"-20NC X 3" RHCS (S.S.)
2	3/8" (S.S.)

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The "dial" feature makes entering dimensions easy. Just watch the dial and click when the dimension is correct.

The software also let users measure clearances without lengthy calculations because it models in real-world coordinates.

Additionally, VersaCAD comes with hundreds of symbols for plant design and other projects. Mechanical symbols, for example, include anything from a bolt or nut to a whole machine. Merely drag symbols from the library over to the drawings. Making a custom library is a snap.

The Group-Isometric feature also makes things easy. It creates isometric views semiautomatically when users complete plan-views and elevations. And users can plot drawings at any scale to any device supported by the operating system.

The program's translator, another useful feature, cleanly translates VersaCAD files to or from DXF, DWG, and IGES formats. Unlike many other programs, which guard their file formats so users are required to purchase the software, VersaCAD

is open to all other CAD systems. Its file format is even documented in the user manual, which explains what each field contains and how many characters comprise the content.

The features add up to a lot of flexibility. For example, I can engineer a basic conveyor and quickly modify its length and width to fit different locations. And it's easy to copy and paste repeated details in a machine design and place them on drawings, or change plant layouts for the best use of space and manpower. Modifications are easy. Simply tweak the existing drawings stored in the computer file.

My customers like being able to choose from numerous design options. They also appreciate having their engineering work done in a modern, low-cost manner, and the clear, professional presentation of VersaCAD drawings.

Lastly, I have always been a fan of the Macintosh computer. The elegance and simplicity of its OS lets me concentrate on design work rather than computer intricacies. OS X has a sharp

graphical-user interface that makes working with the computer a joy. For example, the built-in PDF capability lets me produce drawings, convert them to PDF files, and e-mail them to customers. They won't need VersaCAD to view the files.

I do, however, have a short wish list. It would be nice if the software allowed using a scanned drawing as a background. But I have built a lot of efficient machines and plants using VersaCAD as my only design tool. Version 2006 and an Intel-based, dual-core Mac could double operational speed and let me do a lot more.

VersaCAD Mac comes from **Archway Systems**, 2134 Main St., Suite 160, Huntington Beach, CA 92648, (714) 374-0440, archwaysystems.com.

— Alan Mefford

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