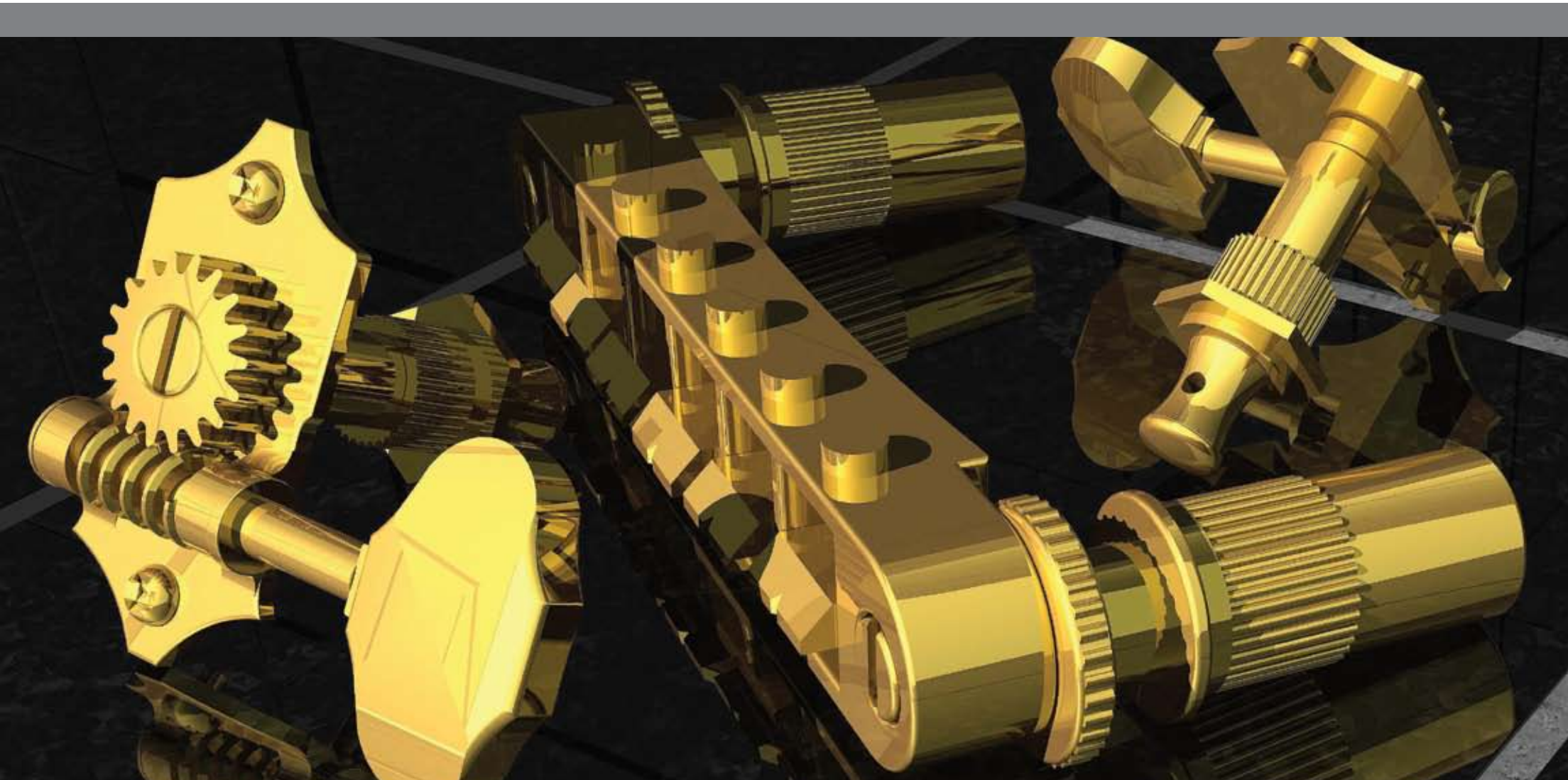# Vectorworks® Machine Design
Realize Your Most Inspired Visions

Vectorworks Machine Design

Vectorworks Machine Design 2010:

1 Flexible
Enjoy the Freedom to Design the Way You Want

2 Versatile
Create, Model, and Present with One Application

3 Intuitive
Work the Way You think

4 Smart
Make a Good Investment in Yourself

Time For Change

Meet the new Vectorworks Machine Design 2010—a comprehensive design application that will streamline your work. With superior 2D and 3D capabilities, you can tackle larger and more complex models and enjoy higher levels of modeling automation. You can spend less time verifying accuracy and completeness and more time designing. And, you can do it all at speeds faster than our previous versions. Change doesn't have to be hard—we've made it easy.

1 Flexible: Enjoy the Freedom to Design the Way You Want

With Vectorworks Machine Design you're not limited to a prescribed workflow, so you have the freedom to work the way you want—on any size project, or in 2D or 3D. Design whatever you can dream up. The possibilities are wide open.

Cutting Edge 3D
See it in 3D. Send models to 3D CAM machines and 3D printers, or access third-party model content. Vectorworks supports a number of standard 3D file formats, including Parasolid X_T, IGES, SAT, STL and 3DS.

Efficient Workgroup Capabilities
Break up complex projects. Whether you're a sole practitioner subbing out work or a large firm dividing work among different members of the team, Vectorworks' workgroup referencing provides a flexible way to split even the most complicated project into manageable pieces.

Easily Share CAD Files
Exchange files with designers using other CAD and modeling applications with support for DWG/DXF.

Endless Digital Images
Make your work even more compelling and easier to communicate with digital imagery. Import scans, digital photos, or web images. Import or export a wide array of image files, including Illustrator® EPS, and native Photoshop® PSD files. Also, export your design for inclusion in your firm's marketing materials or website.

Completely Customizable Programming
Create your own Vectorworks Machine Design with a complete, self-contained development environment named VectorScript™. It's simple enough for a beginner, yet powerful enough for the most experienced CAD programmer. Program everything from simple scripts that automate routine tasks to full-blown commercial applications.

Vectorworks Machine Design

2 **Versatile: Create, Model, and Present with One Application**

Move easily between tasks. From design concepts to manufacturing documentation and every design phase in between, Vectorworks Machine Design marries precision 2D drafting and flexible 3D modeling with state-of-the-art technology. Create, model, and present easily and precisely with one application. With Vectorworks Machine Design, you can do it all.

Precision 2D Drafting

Make drawing fast and fun, no matter how complicated the design. Our streamlined drafting environment includes a suite of 2D drawing and editing tools that make quick work of any type of project. Explore 2D parametric constraints that maintain relationships between 2D objects. Use a full spectrum of dimensioning tools that instantly support common standards like ISO, ASME, DIN, and others, as well as a set of easy-to-use GD&T symbols. Take advantage of text and notation capabilities that make your drawings even more powerful. For your finishing touches, stylize the text with a choice of fonts and sizes, check your spelling, and extrude text into 3D.

Freeform 3D Modeling

Blend, twist, sculpt, and deform. Punch holes. A suite of solids and NURBS surface modeling tools enable you to create any shape and easily explore organic geometry. With 16-bit floating-point precision, your models will be accurate and ready for analysis and manufacturing.

Intelligent Object Technology

Interact with your design on an entirely new level. In addition to traditional CAD tools, Machine Design features intelligent machine objects that you can manipulate just as you would in the real world. Easily reconfigure or customize gears, cams, shafts, springs, bearings, and fasteners. It's so simple you can make complex design changes on the fly. And since most objects in Vectorworks display in 2D and 3D, it's a snap to generate 3D models from your 2D designs.

Easy Data Tracking

Track your project costs and materials with one application. It's a breeze with a built-in database and spreadsheet capabilities. Attach data like man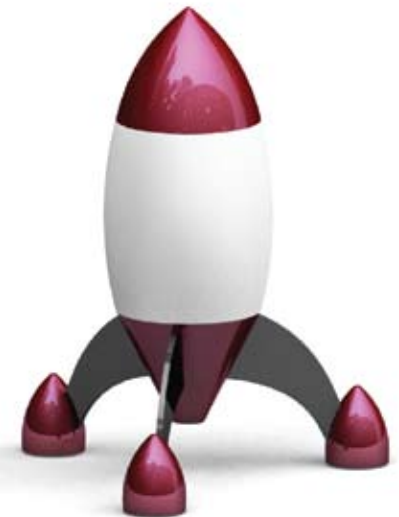ufacturer name, size, part number, and pricing to any object in your drawings. Access this information anytime or use it to generate schedules and other reports. Since the reports and drawings are linked, a change to one automatically updates the other.

Superior in Presentations

A design is not complete until you sell it through. With Vectorworks Machine Design, you can create high-quality renderings and even present your designs as animated movies.

Renderworks

Plug in Renderworks™ to upgrade your presentations with textures, map images as decals, and add shadows and backgrounds that have a photorealistic look. You can also choose from a list of artistic rendering styles to give your presentations a softer, hand-rendered effect. Unique page layout capabilities make it simple to arrange 2D views of your 3D models.
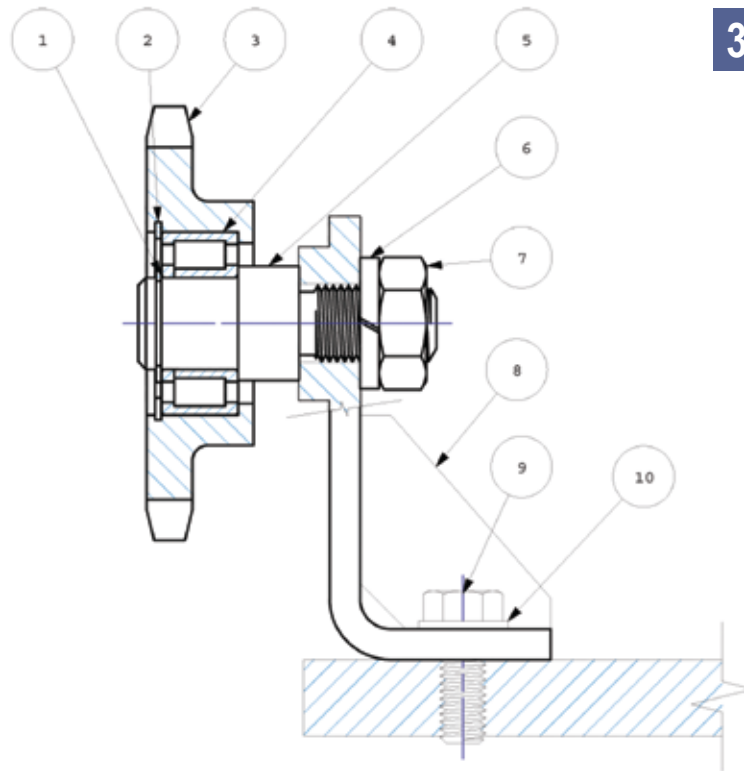
Courtesy of Richard Gue

Vectorworks Machine Design

Courtesy of Thomas Gillett
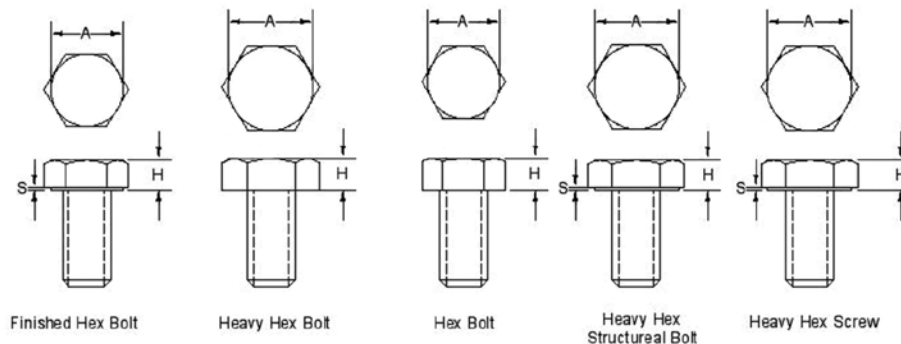
3 Intuitive: Work the Way You Think

Out of the box and out of the gate—Vectorworks Machine Design was designed to think like you do, so you are up and running right away.
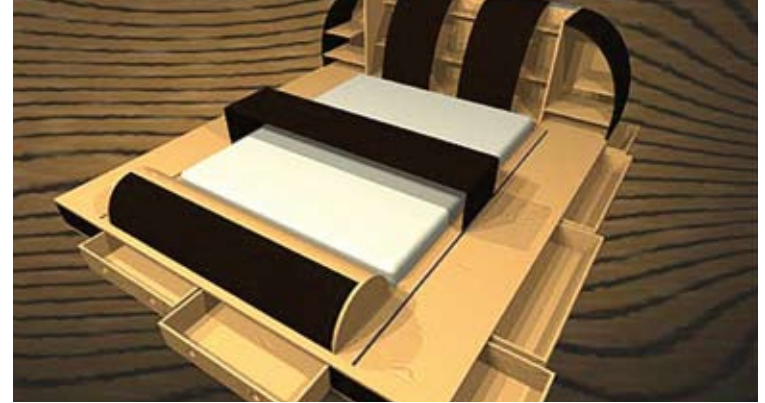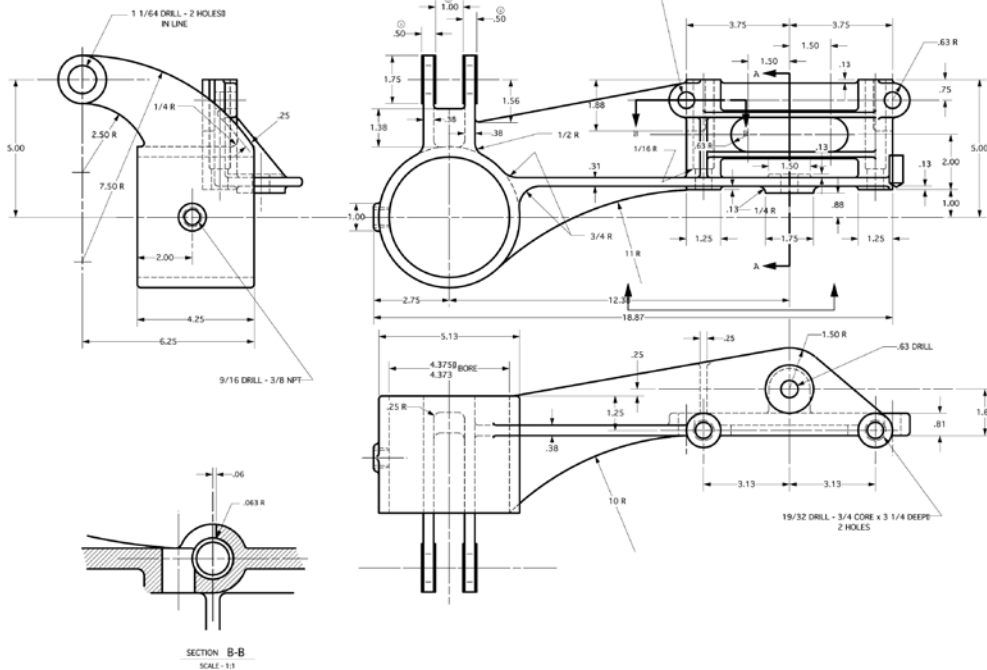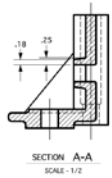
Easy-to-use Interface and Drafting Tools

Do what you like to do best—design. You won't waste time getting up to speed because Vectorworks Machine Design's simple, customizable interface and what-you-see-is-what-you-get display make it easier to learn and use than other CAD applications. No matter what you're switching from, Vectorworks Machine Design's interface will be familiar. Vectorworks' SmartCursor™ technology replaces manual drafting tools, so inexperienced CAD users can make the switch easily.

Tailored for Your Success

Machine Design leaves other general purpose CAD and modeling software in the dust because it was built specifically for you—design engineers, machine shops, and fabricators. Take advantage of design aids like belt and chain length and beam calculators, test your designs with intelligent machine components that mimic real life situations, and analyze common machine components like shafts, cams, and beams.

Finished Hex Bolt

Heavy Hex Bolt

Hex Bolt

Heavy Hex Structureal Bolt

Heavy Hex Screw

Vectorworks Machine Design

Courtesy of Cedric Di Donato, Farnese Interior Design

4 Smart: Make a Good Investment in Yourself

Affordable, customer focused, and proven worldwide—Vectorworks Machine Design is a smart investment in you.

Affordable

You won't find another professional design application that includes so much for such a reasonable price. In one package, you get state-of-the-art tools and technology and the ability to work from conception to completion—a great value. You also get free software updates and affordable upgrades. With free technical support and reasonable training options, you get value far beyond your initial savings. We never force subscriptions, so you're free to upgrade when and how you choose. As your business grows, we add extra seats at a discounted price. We offer a lot of great value and no hidden fees.

Customer Focused

Relax. We're here for you every step of the way. Your relationship with us doesn't end when you install the software. That's just the beginning. We provide many channels for you to get the information you need. If you'd like training, take advantage of our multiple offerings: onsite, online, or in the classroom. If a technical issue stumps you, contact our technical support team for help. You can also tap into our Vectorworks community with over 450,000 enthusiastic users worldwide, as well as user groups on the local level. E-mail listservs provide assistance around the clock, or you can use a service directory and job board to find help.

Vectorworks users often find themselves in Internet-based dialogues with our engineers and managers. We take pride in cultivating lasting relationships with our users, and we translate their feedback into positive product developments. With your input, we can continue to develop software that exceeds your expectations. After all, your success is our success.

Vectorworks Machine Design

"Designing in 3D with Vectorworks has definitely eliminated mistakes and cut down on expensive redesigns for me."

Sam Cavitt
Media Environment Design

Courtesy of Ivan W. Shorty

Proven Worldwide

Be part of a long tradition of excellence. Vectorworks was founded over 20 years ago, and now counts more than 450,000 professional designers worldwide. We listen to our customers and use their feedback to create a product that continually exceeds their expectations, delivering superior design flexibility and world-class graphics.

Vectorworks is the best-selling cross-platform professional CAD software and the preferred application for world-renowned designers and artists, as well as countless others who move the design world forward every day.

Courtesy of Adrian Sawyer

Vectorworks is produced by Nemetschek North America, a wholly owned subsidiary of Nemetschek AG, which is the world's leading IT company for the design, construction, and management of buildings and real estate. Nemetschek software solutions are used by professional designers in 142 countries and are available in eight languages.

With Vectorworks Machine Design 2010, the tradition continues.

Vectorworks Machine Design
Realize Your Most Inspired Visions.

Courtesy of Yoshinobu Yamakawa, Polygon Architects

System Recommendations

Mac OS X 10.5.7 or later
QuickTime
Intel Core 2GHz or better
DVD-ROM drive (dual layer)
Screen resolution 1024 x 768 (XGA)
Display color depth 15 bit or higher

Windows XP SP 3
Windows Vista SP 2
QuickTime 7.5 to 7.6 (higher versions not recommended)
DVD-ROM drive (dual layer)
Screen resolution 1024 x 768 (XGA)
Display color depth 15 bit or higher

Vectorworks
RAM 1GB minimum, 2GB recommended
Hard drive space 10GB free

Vectorworks plus Renderworks
RAM 2GB minimum, 4GB recommended
Hard drive space 10GB free

Vectorworks Designer
RAM 1GB minimum, 2GB recommended
Hard drive space 10GB free

Vectorworks Designer plus Renderworks
RAM 2GB minimum, 4GB recommended
Hard drive space 10GB free

See www.vectorworks.net/system-recommendations.php
for updated information.