The most efficient software for footwear

Make your shoes come true

www.icad3dplus.com
ICad3d+ is the first software for footwear design and pattern engineering that integrates into a single program two different environments, virtual 3D and technical 2D, which work in parallel and simultaneously. This way, ICad3d+ is presented as the best virtual alternative to the traditional process of design and pattern engineering, reducing the time spent as well as the material and human resources of the company.

- Design, create and modify footwear models, and their patterns, in parallel and simultaneously in 3D or 2D with total reliability and precision.
- Flatten lasts for all types of footwear, including boots and ankle boots, with total accuracy.
- Modify the flattening with a single “click”, avoiding repeating the processes that should be carried out when such modifications are made manually.
- Create, or import, soles, heels, decorations or accessories quickly and easily, thanks to its intuitive interface.
- Customise and get images as hyper-realistic as photographs taken from real footwear models.
- Simulate the appearance of shoes after last slipping adding realism to your models.

"Having a good idea is great, but it is even better if you know how to carry it out."

ICad3d+
3D footwear design and pattern engineering

"From sketch to virtual design"
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ICad3d+ has been developed by the "Footwear Technology Institute (INESCOP)”. INESCOP has more than 30 years experience in the development of CAD-CAM products and works closely with the companies in the sector. This has allowed them to develop software systems adapted to their customers' needs and always oriented towards continuous improvement.

ICad3d+ can be obtained through the Spanish company "Red 21 S.L.“, which is the exclusive dealer of INESCOP’s CAD-CAM programs with over 20 years experience in sales, distribution and technical support.

- Export the patterns to any cutting device, with no need for further adaptation and without ever losing the 3D-2D correlation.
- Recalculate the yield without having to re-flatten. Thus, you can modify the model parts to maximise material yield.
- Grade the footwear sizes in a completely customisable way and in just one “click”.
- Create fully customisable technical spec sheets, adapted to your company’s production process, by adding any kind of information, photographs and even 3D objects.
- Work in a simple and intuitive environment, very easy to use, where any change is automatically recalculated in both software environments (3D and 2D).
- Get regular software updates and enjoy the most advanced technology at any time.
- Increase the competitiveness and the productivity by reducing the time and the costs of human and material resources, and achieving a faster production.

"Design any footwear type"
Working with ICad3d+ is very simple and intuitive. The first steps to start working are importing a digital last, preparing this last for the model design and start drawing on the last. Then, you can choose working in either software environments of ICad3d+, virtual 3D (to create soles and heels, add volume and thickness, create accessories, etc.) or technical 2D (to flatten, to generate patterns, to grade, etc.). You can change from one environment to another at any time.
ICad3d+ allows you to import a wide range of formats both proprietary (HOR, LST, FVR, etc.) and standard ones (STL, IGS, SEC, OBJ, etc.).

Using the imported last you can obtain the patterns and photorealistic footwear models, fitted to real proportions.

The first step of the process is to import a digital last.

You can modify the digital last in order to create boot lasts and even add or merge insoles, hidden wedges or platforms.
Preparing the last

3D lasts
ICad3d+ automatically calculates the bottom and cone curves, dividing the imported last into the three necessary surfaces for the design and flattening processes (body, bottom and cone).

Edit the front and back profiles to get a perfectly flattened last.

Create virtual lasts for boots and ankle boots following a simple guided process that lengthens the digital last.

Flattening of any last
Using ICad3d+ you can flatten any last, including those for boots and ankle boots, in a totally accurate and reliable way.

Upon flattening the 3D surfaces of the body and the bottom are displayed on a 2D surface where each point is parametrically linked. This way, the modification of any design line on one of these surfaces (3D or 2D) is automatically transferred to the other surface, thus simplifying the process that should otherwise be carried out if these modifications were to be made in a manual way.

Extending the last to create any kind of boot of any height.
The wizard also includes the creation of zipped and gaucho boots and ankle boots.
Intuitive design of style lines

Drawing onto a digital last with ICad3d+ is as easy as drawing on a real last. Working with ICad3d+ will allow you to:

- Use sketches or model pictures as a reference to draw the style lines.
- Draw lines using very few points quickly and easily.
- Perform automatic smoothing of lines and curves to obtain finer and more precise piece outlines.
- Instantly create constant width or variable-width lines.
- Automatically create mirrored lines to work more accurately and save time.
- Make mirror lines independent to edit them individually.
- Save the style lines and re-use them at any time, avoiding iterative work.
- Include any kind of shape in your models, such as punch holes, cut-outs, logos and custom drawings. Such shapes can be stored in a library for future retrieval.
Make your ideas a reality

ICad3d+ creates quickly and easily any kind of sole (sports shoes, platforms, wedges, etc.) and heels.

Thanks to its wizard tools, soles and heels can be created quickly with total precision. Just edit the lines of the created structure in order to modify the component.

You can also create new soles and heels by freely tracing curves and surfaces, without using the wizard tools.

The components can be exported directly to a 3D printer to produce prototypes quickly, thus reducing time and unnecessary costs.
Define 3D pieces instantly

With ICad3d+ you can quickly create all model pieces by selecting the sequence of lines or just with a single “click” on the inside of the piece.

Moreover, using the various options of ICad3d+, your model can be provided with more realism defining piece thickness, adjusting the offset to simulate overlapping, choosing the type of profile, adding padded areas, adding automatic stitches connected to the edge of the piece, and creating punch hole lines.
Create decorations quickly

Easily create decorations of any shape, material and complexity, and organise your own library.

Effortlessly add and adapt decorations in your model using the transformation functions to resize them, rotate them, or even automatically distribute various objects at a constant distance.

In addition, you can automatically create and add many different types of decorations like laces or zippers.

IGES, STL and VRML

Import them from other programs

ICad3d+ allows you to import decorations in standard formats: IGES, STL and VRML.
Creating countless combinations of materials and colours!

ICad3d+ is conceived to speed up the creation of any kind of material (leather, rubber, patent leather, metal, gemstones, rhinestones, etc.) in any colour.

The materials can be created directly in the software using the wizard for material creation, or importing scanned textures that are easily editable with ICad3d+. Created materials can be saved to your own library to use them later.

Apply materials on any part of the model with just one "click", creating countless material combinations in different colours of the same shoe design instantly.

Photorealistic materials

It is so quick and easy to change the appearance of the different components of the same model that it will considerably help designers make decisions and show their work before producing the shoes physically. In addition, ICad3d+ can be complemented with the applications ShoeViewer* (model viewer, free of charge) and ShoeCombiner* (model viewer and material combiner), giving more visibility to your products.

* See more information below
**Virtual last slipping**

**Adaptations that bring more realism**

ICad3d+ can provide models with added realism, and can simulate the real process of slipping the last from the shoe, when certain changes in tension are produced on some materials and shoe pieces.

Thus, it is possible to make numerous deformations, such as changing tongues, altering upper lines, deforming counters and toes (lifting them up), widening quarters or even simulating wrinkles.
Imagine and make it real

ICad3d+ integrates an advanced high quality rendering system* that allows you to obtain so real images (and videos) that it is difficult to tell the difference from pictures taken from physical footwear models. In addition, 3D models can be rendered in any simulated scene.

Try different camera perspectives, locate lights at different points, or adjust lights to simulate special lighting conditions to achieve the desired visual effect.

Unleash your imagination and create any appealing setting for your footwear models. No matter what you have in mind, ICad3d+ can make it real!

Give more visibility to your catalogues, ads, website or presentations with no need to physically produce the shoes.

* Photorealistic representation of a 3D object.
The tools integrated in ICad3d+ not only allow you to design quickly and accurately your footwear models, but also enable you to add a wide range of details that will improve the quality of the technical information of the model.

“Extraordinary definition of details”

Create soles with infinite modelling possibilities and details.

“Add stitches quickly and automatically.”

“All in one is better!”

Photorealistic image
Designed and rendered with ICad3d+
Insert laces automatically.

Photographic realism

Create and locate all kinds of accessories.

Adjust the heights to simulate the overlapping of pieces.

Add any shape or vectorial logo and customise your models.
Total accuracy

Get any 2D flattened last with total reliability and precision, and use it as the basis for the creation of your patterns.

Use the flattened lasts to easily create shells for boots and ankle boots.

Save time and resources. With ICad3d+, any change you make to the 2D design lines will be automatically and accurately transferred to the 3D design and vice versa.

- Accurate and simple flattening of any kind of last: women’s, men’s, children’s, etc.
- Simple and quick operations with shells
- Strobel flattening
- Special flattening of model pieces (pumps)
- Wizard to create boot and ankle boot shells
- Dependent rotation of lines
Quickness and accuracy

Develop your patterns quickly with just one click or by selecting lines.

Work either in 2D or 3D, since all technical adjustments will be precisely transferred to the other environment.

Add allowances (lasting, folding, inlays, etc.) and decorations (stitch marking, punch holes, stitches, etc.) in a fast and simple way.

By using the “Texts” tool, you can organise and identify the patterns to be cut on cardboard or leather, facilitating the subsequent production tasks.
Fast and simple grading

Use standard grading systems or customise them to your needs. In addition, with the grading rules you can control the grading of each of the baselines and thus lock or grade lines individually to grade pieces, such as straps, decorations, labels, counters, zippers or boots.
Optimise leather yield

Calculate in real time the material consumption of your model and minimise waste.

Thanks to the 2D/3D connection, with ICad3d+ you can modify any line and update consumption values instantly without the need to re-flatten. Thus, you can modify the model parts to maximise material yield.

Customise your technical spec sheets

Create and customise the technical spec sheets for the design and production stages.

Export them to PDF integrating any kind of information, pictures and even rotating 3D objects.

Cut your patterns in any cutting machine

Export your patterns to any cutting machine without any additional adaptation and always keeping the 3D/2D correlation.
With ShoeViewer your customers, or any other user, can view at no cost the models designed with lCad3d+ in great detail and from different perspectives, in a simple and attractive setting.

Download ShoeViewer free of charge
ShoeCombiner is an application that allows 3D footwear models to be viewed and different materials, colours and textures to be combined in a quick and easy way. Optionally, you can also view the rendered image of the model created. Customise the software interface adding your logo as well as choosing the colour combination that best suits your corporate image.
Contact our sales department and we will advise you on the product that best suits your business.

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ICad3d+ Design

Aimed at footwear professionals and technicians who want to create virtual prototypes, or transfer handmade sketches to a virtual 3D environment, with high definition detail, quality and realism. It is also intended to obtain flattened lasts and 2D-3D patterns with total accuracy and 2D-3D correlation, as well as to generate complete technical information in order to send the model to the manufacturing stage.

Furthermore, the integrated rendering software makes it especially useful to provide hyperrealism to the models created, allowing designers to make decisions without physically producing all the footwear models. Rendered images can also be used to give greater visibility to catalogues, adds, websites or presentations.

Aimed at footwear professionals and technicians who want to get 2D patterns with pinpoint accuracy from 3D lasts. This way, the model can be designed by directly drawing onto a 3D last and get a perfect 2D flattened last.

ICad3d+ Patterns

Intended for users who do not have the ICad3d+ software and wish to view the 3D models created with this software.

ShoeViewer

Aimed at footwear professionals and technicians who want to view easily, quickly and realistically, the different possibilities of materials and colours that can be applied on the virtual models created with ICad3d+. It is then easier and faster to make decisions about the different model variations to be manufactured, without physically producing them.

ShoeCombiner

ICad3d+ Pro
[Design + Patterns]

ICad3d+ Versions

ICad3d+ Design

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