Software for design and manufacture of stairs

From sales to production

staircon.com
Streamline stair production and increase sales

The complete software for stair manufacturers

Modern technology from the Elecosoft group

Staircon is a part of the Elecosoft group which focuses on software development and associated services for the worldwide architectural, engineering and construction industries.

Elecosoft software covers major aspects of construction projects including 3D design, project management and estimation plus an expanding range of specialist timber engineering software solutions. These solutions are developed by our highly skilled and innovative in-house teams.

At Elecosoft, we aspire to give our customers an advantage by providing them with state of the art software solutions to give them a competitive edge in their respective markets.

The first version of Staircon was released in 1999. Since then it has been our aim to keep Staircon in the position of being the leading software on the market for stair production. Staircon is continuously developed because we believe that stair design will continue to evolve and that new production methods and modern technology will continue to advance innovation.
**UK based support**
Technical support is part of the success of any CAD/CAM software. Staircon offers strong UK based support to its customers.

**Easy-to-use**
Staircon is developed for Microsoft Windows, an environment familiar to most users. The intuitive graphic user interface is well laid out, easy to learn and easy-to-use. We offer the following options:

- **Staircon® Sales**
  Design and sales

- **Staircon® Professional**
  Production full-scale drawings

- **Staircon® Showroom**
  Web 3D catalogue

- **Staircon® Online Designer**
  Web design and sales

- **Staircon® CAM 3/4 axis**
  Link to CNC machine

- **Staircon® CAM 5 axis**
  Link to CNC machine

- **Staircon® CAM 5 axis+**
  Link to CNC machine

- 3D export COLLADA and o2c
- 3D export COLLADA and o2c
- Pricing
- Pricing
- Pricing

- DXF export

- Fixture positioning
- Fixture positioning
- Fixture positioning

- Tread split
- Tread split
- Tread split
**Make a design that sells**

The staircase is designed in three views: plan view, side view and 3D view. The 3D view is a tool used while designing and during the presentation to the customer. Guides with predefined stair shapes are used to quickly draw the most common staircases. They can be modified into any shape. There is no limitation on the number of stairs, floors or stairwell openings that can be designed in a single project. Floor balustrades, openings and walls can be freely designed. Measurements of the stair can be placed automatically and the stair’s compliance to chosen code (headroom, step height etc.) is easily tested. Scaled printout drawings of plan, side and 3D views are quickly generated.

**Staircon® Showroom**

**Always open to visitors**

Instead of paper printouts and flat PDF files, the range of products are displayed with a web-based catalogue where the customer can pan, zoom and rotate the stair. Not only can the customer easily select different options, for example material and finish to see the result in 3D, they also have a good understanding of what the stair will look like when finished. A number of predefined stair geometries are generated using the Staircon database. Used in combination with the add-on pricing module, there is an option to display the price of the stair as well.
Staircon®
Professional

Prepare with the push of a button
With Staircon Professional, in addition to the design capabilities, you get a tool for the work preparation. The following can be carried out in an effective, well coordinated way:

- Generate production data with material optimisation
- Full size print of production details
- Scaled production drawings
- Bill of material
- Print the plan (view scale 1:1)

Staircon®
Limited

For the basic stair shapes
Staircon Limited allows the functionality of Staircon Professional, but with some restrictions. Some examples of functionality not included are:

- Spiral or S-shaped stairs
- Arc strings/handrails/floor openings
- Round posts
- Stair with Z-risers
- Curved front edge on treads/steps
- Restricted from sharing projects with Staircon Sales or Professional
The steering power behind your CNC production

Manage with full control
Depending on your machine and production options, Staircon CAM is available in three levels. You can choose Staircon CAM3/4, Staircon CAM5 or Staircon CAM5+. Configuration and managing functions are accessible in all versions. The day-to-day work is done in one single view showing everything from the initial project to the finished CNC file. The simulation of tool paths and/or CNC code visualised in 3D provides a good understanding of what the generated CNC program will ultimately do. Multiple intervention points are possible to trace and analyse, down to each individual coordinate point. Staircon CAM is offered with the add-on module Edit database to allow access to the Staircon database.

Optimise production flow
Multiple Staircon production files can be processed simultaneously offering the advantage of processing details from several projects at a time and optimising table layouts for details. The system can be setup to run several machines and distribute the stair details among them according to a set of rules. Informative reports offer help to operators with, for example, a post rotation scheme.
Staircon®
CAM 3/4

The power of automated production

Examples of machinings:

- Drillings and pockets with automatic tool selection
- 3 or 4-axis riser pockets and step pockets
- Contour and profiling with general arc recognition functionality to output arc commands (G2/G3) in order to provide a smooth result
- Helical and interpolation drillings
- Sawing (4-axis)
- 4-axis mitres

Please note: functionality may vary due to machine limitations.

Staircon®
CAM 5

The perfect match, in every angle

Excluding arc details and stairs with Z-risers

Examples of machinings:

- Including functionality of Staircon CAM 3/4
- Angled drillings and riser pockets
- Mitres
- 5-axis tenons
- 5-axis drillings

Please note: functionality may vary due to machine limitations.
Staircon®
CAM 5+

Sweeping curves and sharp Zs
Including arc details and stairs with Z-risers

Examples of machinings (includes functionality of Staircon CAM 5):
- Arc string
- Arc handrail
- Arc handrail together with arc string
- Groove for underside of arc handrails
- Production of stair with Z-riser (also using saw)

Please note: functionality may vary due to machine limitations.

CAM add-on modules

Optional functionality in addition
- Fixture positioning: automatic positioning of beams and pods to hold the pieces on the work table
- Output as laser file: led or motorised positioning of beams/pods
- Step split function: for machines that can split steps or pop up fixtures
- Barcode: enables use of a bar code reader to pick up the right laser or CNC programs
- Customisation: depends on actual system
- Staircon CAM operator: an application that opens NC code and laser files generated in Staircon CAM and transfers to machine/laser

Please note: functionality may vary due to machine limitations.
Add-on modules

Export 3D file and send to customer

Instead of showing the stair with images, a 3D file can be sent to the end customer for viewing. This is a much-valued sales tool for our users. Staircon 3D export comes with options for two different formats:

- Collada (open standard format) is rich in detail. The end customer can view the COLLADA 3D in applications that support *.dae, there are several free options. The format is also importable in several rendering softwares and some 3D CAD packages, for example SketchUp and AutoCAD via a converter
- o2c format is viewed with the free o2c player
- IFC2x3: is an open file format that is used to carry information between different CAD software. It’s the international standard for exchanging BIM data.

Export 2D file, DXF

Output dxf from plan view, side view and production details. The production files can be exported to separate files and/or separate layers for later processing in external CAM system.

Edit database

The power of software can only be experienced if it is tailored to your own needs and methods. With this add-on module the database can be accessed and edited continuously by the user. Some examples of data:

- The stair model: a model/template is applied to the stair in order for the design of the basic staircases to be quick and easy. The model has predefined settings for the construction and production methods, for example: step distribution, type of posts and balusters, thickness of strings and steps etc. All of this can be adjusted after the model is placed to meet specific customer requests
- Stair parts: posts, balusters, strings etc.
- Material and finish
- Textures for walls, doors, floor etc.
- Profile ID: carries information to Staircon CAM about how the machining is to be performed

Add-on modules
Pricing
Design a stair, press a button, and get a calculated price for the stair. The price is set for the stair parts, for example: steps, posts, balusters, handrails etc. The price is separated into two; one for the part and one for applying the finish to the part.

Pricing is offered with the add-on Edit database module to allow access to the Staircon database.

Generate CAM data
This enables a Staircon professional user to create production file (PRX) for Staircon CAM. This way multiple users with Staircon professional level (designers) can generate prx files for one or more Staircon CAM users.

ERP
Enables import and export of data from/to ERP systems. Customisation is mandatory and depends on the system being used.

DXF for CAM
For manufacturers who already have a CAM software for 3-axis machining in place, DXF for CAM provides an efficient link to Staircon Professional.

The module offers a customised setup of DXF layers used to automate processing of the DXF files into machine-specific CNC code.

Examples of customisation:
- Customised configuration for each part type
- Drillings and pockets grouped to layers via dynamic naming
- Additional layers to aid finishing visible segments of the part contour
- Duplicated feature layers for repeated machinings
- Pocket geometry including nosing profile
- Possible to extend one pocket into another and beyond contour/edge to remove radiuses
- Continuous toolpath for tread and riser pockets
- Starting point and direction