



ScotWeave **Technical Weaver** is a new product within our suite of CAD programs that has been tailored to meet the exacting requirements of technical textiles producers and engineers creating industrial, commercial and geo-textiles. Technical Weaver offers a complete CAD-CAM software package for creating all types of dobby or jacquard preforms where the structure architecture and performance is vital.

Weaving

For technical applications, choose ScotWeave **Technical Weaver** to create Dobby and/or jacquard fabrics. The software supports creation of simple single cloth structures, to complex layered architectures, containing stacking orders, stuffers and variable densities. Virtually any weave on up to 64 shafts for dobby looms, or up to 12,000+ hooks for jacquard can be created, with the production data being sent directly to the loom.

Yarns

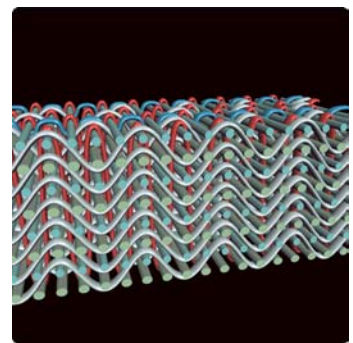
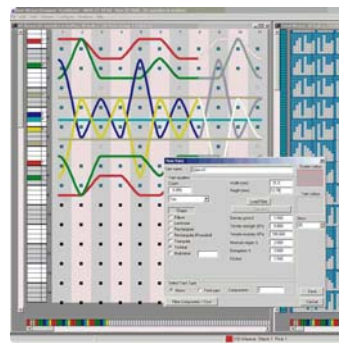
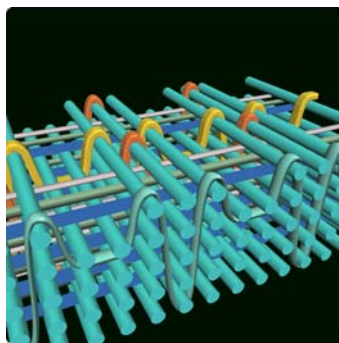
Yarns are created in a special version of ScotWeave **Yarn Designer** which uses real yarn information including yarn count, and fibre type. Technical data including density and tensile strength can be input to allow for future calculations based on the yarn and fibre composition. The cross-sectional shape of the yarn can be recorded for more accurate 3D weave schematics.

Fibre data			
Fibre name	Kevlar49	Compression points	0
Tex	0.000	0.000	0.000
Density (g/cm3)	1.470	Initial bending Nmm2	0.000
Strength (MPa)	2800.000	Bending rigidity points	0
Young Modulus GPa (long)	154.000	0.000	0.000
Poisson (long)	0.350	Bending torque points	0
Shear Modulus GPa (long)	2.900	0.000	0.000
Young Modulus GPa (tran)	4.200	Initial tension N	0.000
Poisson (tran)	0.350	Ultimate tension N	0.000
Shear Modulus GPa (tran)	2.900	Ultimate strain %	0.000
Elongation %	0.000	Tension rigidity points	0
Moisture regain %	0.000	0.000	0.000
Decomposition	550.000	Tension curve points	0
LOI	0.000	0.000	0.000
Stiffness	0.000	Friction f	0.000
Linear density	0.000	Friction coefficient	0.000
Strain %	0.000	Friction N	0.000

New Yarn			
Yarn name	z-hhs32		
Yarn qualities	Count	Width (mm)	60.000
	0.950	Height (mm)	12
Tex	Load Fibre		
Shape	Zylon(AS)		
<input type="radio"/> Ellipse	Density g/cm3	1.540	
<input type="radio"/> Lenticular	Tensile strength GPa	5.800	
<input type="radio"/> Rectangular	Tensile modulus GPa	180.000	
<input type="radio"/> Rectangular (Rounded)	Moisture regain %	2.000	
<input type="radio"/> Triangular	Elongation %	3.500	
<input checked="" type="radio"/> Tri-lobal	Friction	1.540	
<input type="radio"/> Multi-lobal			
Gloss	0		
Select Yarn Type	<input type="radio"/> Mono <input type="radio"/> Twist yarn Components 3		
Fibre Composition / Cost			

Cross-Section

Creation of the most complex architectures is completed in the cross-section input window. Here you can choose the number of stacking weft tows, binding warp tows, and straight stuffer warp tows required to complete a structure. If pockets of space/holes are required within the architecture, then wefts can easily be removed from the stack to visualise locations for the injection of resin, concrete etc. When working on a large weave structure, you can break the down into "groups" (sub-sections) to aid easy input. Copy and rotation tools can be used between groups to reduce repetitive tasks. the flat weave notation (warp lifting plan) is automatically extracted and shown alongside the cross-section display. As edits are made to the wweave notation, the cross-section window updates in real time.



Weave 3D

The **Weave 3D** schematic allows instant access of architecture performance. Real time dynamic movement of the viewpoint allows the weave preform to be analysed from all angles. Rotate an individual or selection of weave groups to view interlacings from the top, through the cross-section, from beneath, in warp or weft directions or from a corner. The weave lifts can be edited on the 3D image, which automatically updates the weave notation. **Weave 3D** is an ideal tool for in-house architecture development.

Production

As the overall mechanical and physical properties are directly influenced by the weave architecture, tension checking facilities are available prior to weaving. For electronic looms the production data can be passed directly to the loom or jacquard controller. Complex jacquard hook maps can easily be created. Printed loomcards can be configured by ScotCad Textiles Ltd to closely match that of most existing production specification sheets. The loomcard can be printed or saved as an HTML file ready for attaching to e-mail.

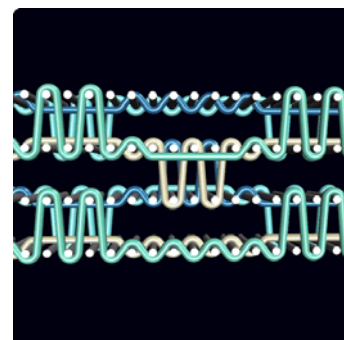
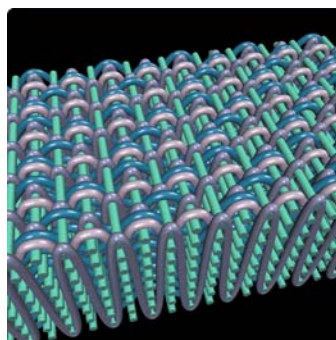
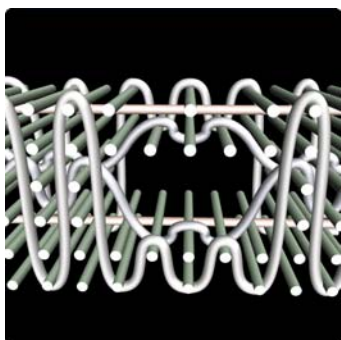




ScotWeave is the most **comprehensive CAD-CAM tool** for woven textile design currently available. Using an intuitive visual design approach ScotWeave is simple to use, quick to learn, and produces stunning results on screen, on printer and direct to loom. ScotWeave software runs under all current versions of **Microsoft Windows®**, uses industry standard computer hardware, and any Windows®-compatible colour printer, scanner or other hardware.

Special Features

- ★ **Production Data** can be sent directly to electronic dobby and jacquard controllers
- ★ **Warp Lift** tension checker with option to weave face down
- ★ **Weave 3D** for real 3D viewing of structure with stitch amendment option
- ★ **Float Check** and automatic “smart” break options on total weave or selected weaves
- ★ **Your Calculations** can be utilised within the ScotWeave software
- ★ **Bespoke software** written to meet your requirements



Dobby Designer

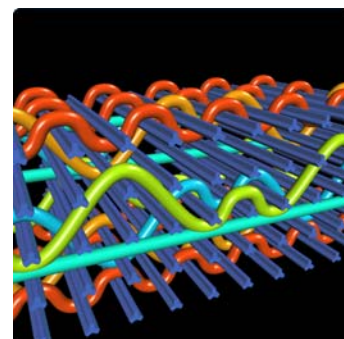
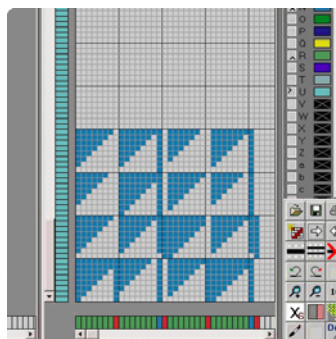
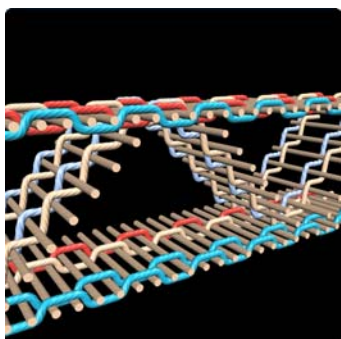
Dobby Designer allows you to work with the draft/draw and peg/chain plan or you can work with the composite weave and let Technical Weaver software to automatically generate the draft and lifting plan. Up to 64 shafts can be accommodated, with float checking and tie down options. Fabric simulations are automatically generated when yarns are applied to the weave.

Jacquard Designer

Use ScotWeave **Artwork Designer** to create an image in which each colour area represents a weave structure. This image is scaled to correct loom proportions using your weaving details (jacquard hooks and warp/weft settings). Edge locking and weft cramming may be added if required. Use **Jacquard Designer** to assign weaves to artwork colours, and the total jacquard notation is generated. Advanced float checking and breaking options are available to “intelligently” break floats between specified weaves. The warp load (number of times each warp end is lifted) can be viewed to highlight areas of stress in the fabric construction and any problems identified for easy fixing.

Software Support

Software support is a high priority at ScotCad Textiles Ltd, and we believe our support is second to none. All ScotWeave software products are fully supported (i.e. we can add new features, change existing features, provide full problem solving and bug fixing). For details visit www.scotweave.com/customer.html



How to contact ScotCad Textiles Ltd



Tel: +44 (0)1896 850473



Email: info@ScotWeave.com



Web: www.ScotWeave.com