



S-CALC™

Cross-Section Property Calculator

Calculate 19 Section Properties including Shear Center, Shear Area, Torsional Constant and Warping Constant

Calculate geometric, polar, plastic, principal, shear, and torsion properties about the centroid or a user-defined axis.

Elastic, plastic and principal axes are displayed in the visual editor.

Choose between database values, various closed form solutions, polygon calculation or Finite Element Analysis.

Numerous Databases and Parametric Shape Options help you define your section

Choose between the latest steel databases from USA, Canada, Europe, Japan and more, all with support for Metric and Imperial units.

Parametric modeling saves time and offers a high level of customization for Standard, Cold-formed, Hollow, Bridge, Bridge Girder, Reinforced Concrete, Built-up and Composite sections.

Bridge sections combine bridge decks and girders.

Easily create capped, plated, mirrored and crossed sections with the Built-Up sections feature.

Polygon, Hollow Polygon, Cold-formed Polygon and Polygon Strip let users draw sections by hand.

Support for Multi-Material Sections

Create sections from included or user-defined materials and calculate properties based on a chosen reference material. Now includes Torsional Constant and Shear Area for multi-material sections using Superposition Approximation.

Automation and Customization with Python IDE and .NET API

Quickly export your model into a script for customization and automation

Built-in Script Editor with auto-complete allows automation of any work flow right from the S-CALC user interface.

Optimization and Design of cross sections is shown in easy to follow tutorials. Automate everything you do in the S-CALC interface

Flexible and Customizable User Interface

Drag-and-drop, dock, or hide windows that snap in place to create personalized layouts.

Windows can span multiple monitors or be tabbed to save space.

Multi-format IO for easy transfer to S-FRAME, CAD, or BIM Software

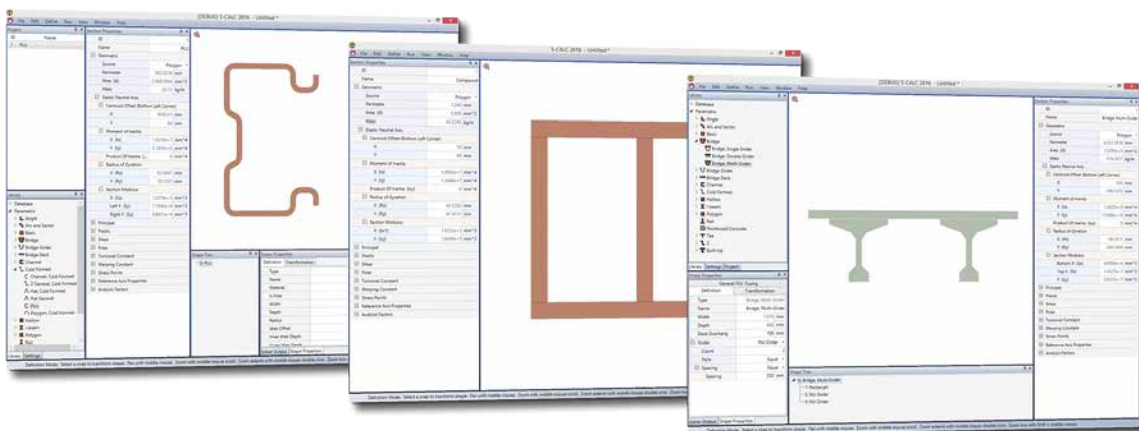
New DXF Link with 3D visualization, Layer Control and File Information.

New Revit™ Link with 3D visualization and powerful Database, Parametric, Polygon and Polygon section mapping.

Additional Support for S-FRAME native file formats including TEL, DMP, DSP and TBL

Powerful Report Generation with Support for PDF and Excel™

Quickly and cleanly save your S-CALC data into well-organized company branded PDF or excel reports containing graphics, table of contents, section properties grouped by type and material properties





S-CALC™

Cross-Section Property Calculator

User Interface	Context-sensitive HTML based help Customizable window layout	Intuitive Visual Editor Multi-monitor support	Solver Output window for FEA			
Steel Section Databases	CISC AISC Australia	Japan Europe UK	Perwaja Asia South Africa			
Shape Creation	22 Steel Section Databases 71 Parametric shapes Snap-to-grid and snap-to-shapes	Bridge shapes Built-up shapes Composite shapes	Reinforced Concrete sections Optional fillets and rounded corners Polygons for user defined sections Polygon Merge and Cut			
Section Properties	Plastic Axes Plastic Section Modulus Elastic Section Modulus Principal Axes Principal Moment of Inertia Principal Radius of Gyration Principal Elastic Section Modulus	Moment of Inertia Radius of Gyration Area Perimeter Mass Stress Points	Polar Moment of Inertia Polar Radius of Gyration Shear Center Shear Area Torsional Constant Warping Constant			
Automation	Quickly export, reuse and share user defined actions with scripts Built-in script editor auto-complete		.NET DLL for API Access Tutorial scripts including Optimization and Design			
Finite Element Analysis	Shear Center Shear Area Fused shapes	Torsion Constant Warping Constant	Thin-Wall FEA General FEA			
Reporting Features	Customizable Title Page Table of Contents User data	Shape Dimensions Section Properties Section Images	Report Export Formats: Excel, PDF, HTML, CSV			
Data Sharing Features		Import	Export	Geometry	Section Properties	Material Data
	SFRM	✓	✓	✓	✓	✓
	TEL	✓	✓		✓	✓
	TBL	✓	✓	✓		
	DXF	✓	✓	✓		
	Revit™	✓	✓	✓	✓	✓
	DSP	✓	✓		✓	
DMP	✓	✓			✓	
* SFRM, TEL, TBL, DSP and DMP are S-FRAME Analysis native file formats						

