



SVHEAT^{GE}
1D / 2D / 3D FINITE ELEMENT
FREEZE / THAW MODELING



SOILVISION[®]
SOILVISION SYSTEMS LTD.
120 - 502 WELLMAN CRESCENT, SASKATOON, SK. S7T 0J1 CANADA
TEL: +01.306.477.3324 / FAX: +01.306.955.4575
SOILVISION.COM / CONTACT@SOILVISION.COM

FEATURE COMPARISON					
Feature	PRODUCT VERSION	STUDENT	CLASSROOM	STANDARD	PRO
Verification, Tutorial, and Example Manuals with Corresponding Models Provided		Yes	Yes	Yes	Yes
Create/Edit Models		Yes	Yes	Yes	Yes
CAD Windows Interface		Yes	Yes	Yes	Yes
Integrated Help System		Yes	Yes	Yes	Yes
Batch Analysis of Groups of Models		Yes	Yes	Yes	Yes
Windows 7, 8 and 10 Compatible		Yes	Yes	Yes	Yes
Multi-Core CPUs, Multi-Threading & 64 bit Environments Supported		Yes	Yes	Yes	Yes
Licensed for Engineering Consulting Use (Commercial Licenses Only)				Yes	Yes
Geometry					
Number of Regions		10	10	Unlimited	Unlimited
Number of Materials		3	3	Unlimited	Unlimited
Number of 3D Surfaces		3	3	Unlimited	Unlimited
Finite Element Cells		Limited*	Limited*	Unlimited	Unlimited
Import Regions from AutoCAD™ DXF Files			Yes	Yes	Yes
Import of Shape Files (SHP)			Yes	Yes	Yes
Import of ESRI ASCII Grid Files			Yes	Yes	Yes
Pinch Out Surfaces (3D)		Yes	Yes	Yes	Yes
Slice 3D Models to 2D Cross Section		Yes	Yes	Yes	Yes
Coordinate Systems					
1D Analysis		Yes	Yes	Yes	Yes
2D Analysis		Yes	Yes	Yes	Yes
3D Analysis		Yes	Yes	Yes	Yes
Axisymmetric Analysis			Yes	Yes	Yes
Plan View			Yes	Yes	Yes
Temporal					
Steady-State		Yes	Yes	Yes	Yes
Transient			Yes	Yes	Yes
Initial Conditions					
Other SVHeat™ Analysis		Yes	Yes	Yes	Yes
Constant/Equation of Temperature		Yes	Yes	Yes	Yes
Assign Initial Conditions by Region		Yes	Yes	Yes	Yes
Application Types					
Heat Conduction with Phase Change		Yes	Yes	Yes	Yes
Convective Heat Transfer Coupled with SVFLUX™ or SVAIR™					Yes
Mesh					
Fully-Automatic Generation		Yes	Yes	Yes	Yes
Fully-Automatic Mesh Refinement		Yes	Yes	Yes	Yes
Mesh Refinement Following Freezing/Thawing Front		Yes	Yes	Yes	Yes
Equation Solvers					
Galerkin Finite Element Method		Yes	Yes	Yes	Yes
Parallel Processor Support		Yes	Yes	Yes	Yes
Full coupling					
Water					Yes
Air					Yes
3 way Air / Water / Thermal					Yes
Input Data Sets					
From Seepage (SVFLUX™)		Yes	Yes	Yes	Yes
Climate Data					Yes
Thermosyphon Data					Yes
Property Functions					
Various Unfrozen Water Content Functions		Yes	Yes	Yes	Yes
Saturated/Unsaturated Soils		Yes	Yes	Yes	Yes
Thermal Conductivity Function Estimation		Yes	Yes	Yes	Yes
Frozen/Unfrozen Volumetric Heat Capacity		Yes	Yes	Yes	Yes

* Student editions are limited to 100 cells in 1D, 400 cells in 2D and 1200 cells in 3D.