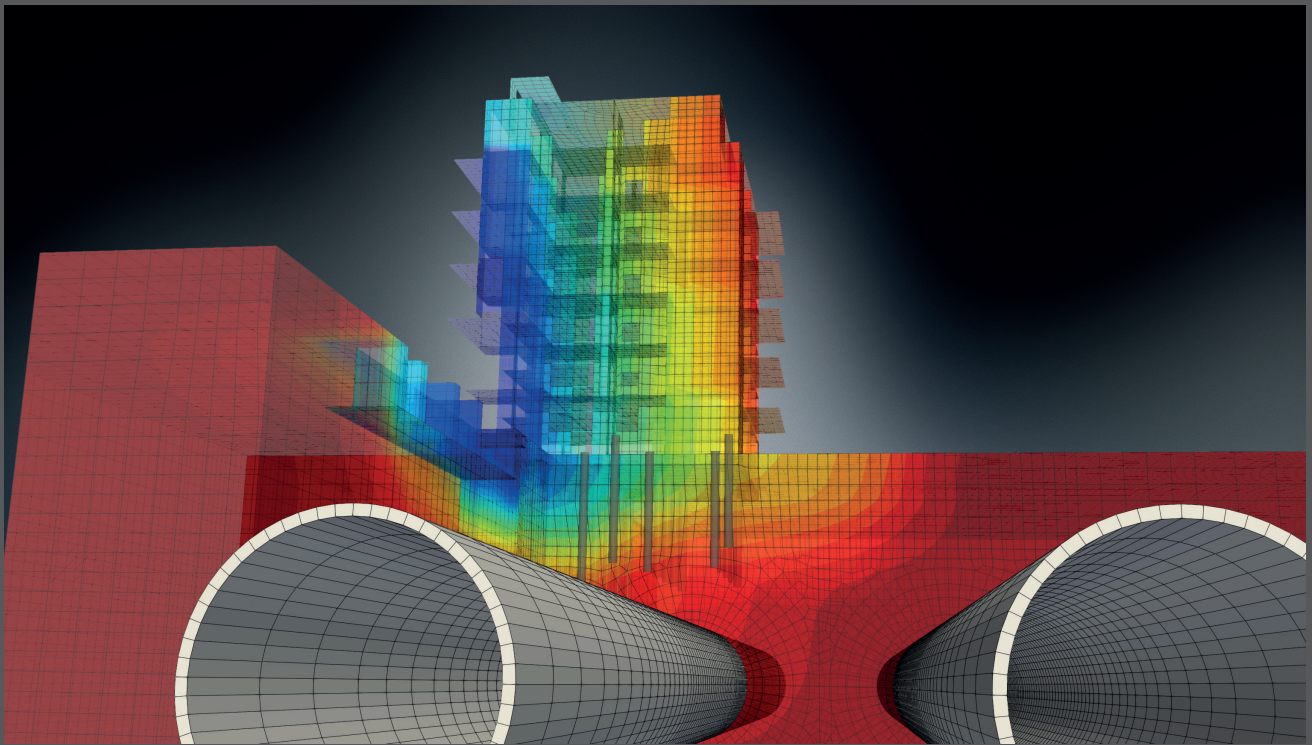




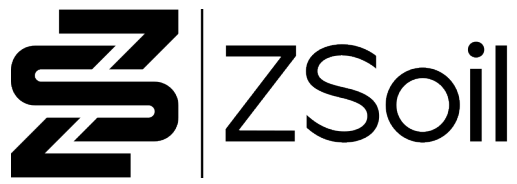
ZSoil

for geotechnics & structures

User manual GETTING STARTED



Soil, rock and structural mechanics
in dry or partially saturated media



for geotechnics & structures

GETTING STARTED

User manual

ZSoil®2026

A. Truty Th. Zimmermann K. Podleś R. Obrzud
with contribution by A. Urbański and S. Commend

GeoDev.

PO Box CH-1001 Lausanne

Switzerland

<https://zsoil.com>

WARNING

ZSoil is regularly updated for minor changes. We recommend that you send us your e-mail, as ZSoil owner, so that we can inform you of latest changes. Otherwise, consult our site regularly and download free upgrades to your version.

Latest updates to the manual are always included in the online help, so that slight differences with your printed manual will appear with time; always refer to the online manual for latest version, in case of doubt.

ZSoil 2026 manual:

1. Data preparation
2. Tutorials and benchmarks
3. Theory

END-USER LICENSE AGREEMENT FOR GeoDev's ZSoil[®] SOFTWARE

Applicable to all V2026 versions: professional & academic, single user & networks, under Windows 10, 11.

Read carefully this document, it is a binding agreement between you and GeoDev Sarl (GeoDev) for the software product identified above. By installing, copying, or otherwise using the software product identified above, you agree to be bound by the terms of this agreement. If you do not agree to the terms of this agreement, promptly return the unused software product to the place from which you obtained it for full refund of price paid. GEODEV SARL OFFERS A 60 DAYS MONEY-BACK GUARANTEE ON ZSOIL.

ZSOIL (the Software & associated hotline services when applicable) SOFTWARE PRODUCT LICENSE:

ZSOIL Software is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The ZSOIL software product is licensed, not sold.

1. GRANT OF LICENSE

- A: **GeoDev Sarl** grants you, the customer, a non-exclusive license to use **N_{bought}** (= the number of licenses bought) copies of **ZSOIL**. You may install copies of **ZSOIL** on an unlimited number of computers, provided that you use only **N_{bought}** copies at the time.
- B: You may make an unlimited number of copies of documents accompanying **ZSOIL**, provided that such copies shall be used only for internal purposes and are not republished or distributed to any third party.
- C: Duration of the agreement may be limited or unlimited, depending on license purchased. Installation of time unlimited licenses of ZSOIL V2026 will be supported for a period of 3 years starting from date of purchase. This support is limited to ZSOIL V2026 upgrades, under Windows 10 and 11.

2. COPYRIGHT

All title and copyrights in and to **the Software** product (including but not limited to images, photographs, text, applets, etc.), the accompanying materials, and any copies of **ZSOIL** are owned by **GeoDev Sarl**. **ZSOIL** is protected by copyright laws and international treaties provisions. Therefore, you must treat **ZSOIL** like any other copyrighted material except that you may make copies of the software for backup or archival purposes or install the software as stipulated under section 1 above.

3. OTHER RIGHTS AND LIMITATIONS

- A: Limitations on Reverse Engineering, Decompilation, Disassembly. You may not reverse engineer, decompile, or disassemble **the Software**.
- B: No separation of components. **ZSOIL** is licensed as a single product and neither **the Software's** components, nor any upgrade may be separated for use by more than **N_{bought}** user(s) at the time.
- C: Rental. You may not lend, rent or lease the software product.
- D: Software transfer. You may permanently transfer all of your rights under this agreement and within the territory (country of purchase and delivery), provided you do not retain any copies, and the recipient agrees to all the terms of this agreement.
- E: Termination. Without prejudice to any other rights, **GeoDev Sarl** may terminate this agreement if you fail to comply with the conditions of this agreement. In such event, you must destroy all copies of **the Software**.

WARRANTIES & LIMITATIONS TO WARRANTIES

1. DISCLAIMER

ZSOIL, developed by **GeoDev Sarl** is a finite element program for the analysis of above- and underground structures in which soil/rock & structural models are used to simulate the soil, rock and/or structural behaviour. The **ZSOIL** code and its soil/rock & structural models have been developed with great care. Although systematic testing and validation have been performed, it cannot be guaranteed that the **ZSOIL** code is free of errors. Moreover, the simulation of geotechnical and/or structural problems by means of the finite element method implicitly involves some inevitable numerical and modelling errors. **ZSOIL** is a tool intended to be used by trained professionals only and is not a substitute for the user's professional judgment or independent testing. The accuracy at which reality is approximated depends highly on the expertise of the user regarding the modelling of the problem, the understanding of the soil and structural models and their limitations, the selection of model parameters, and the ability to judge the reliability of the computational results. Hence, **ZSOIL** may only be used by professionals that possess the aforementioned expertise. The user must be aware of his/her responsibility when he/she uses the computational results for geotechnical design purposes. **GeoDev Sarl** cannot be held responsible or liable for design errors that are based on the output of **ZSOIL** calculations. The user is solely responsible for establishing the adequacy of independent procedures for testing the reliability, accuracy and completeness of any output of **ZSOIL** calculations.

2. LIMITED WARRANTY

GeoDev Sarl warrants that **ZSOIL** will a) perform substantially in accordance with the accompanying written material for a period of 90 days from the date of receipt, and b) any hardware accompanying the product will be free from defects in materials and workmanship under normal use and service for a period of one year, from the date of receipt.

3. CUSTOMER REMEDIES

GeoDev Sarl entire liability and your exclusive remedy shall be at **GeoDev's** option, either a) return of the price paid, or b) repair or replacement of the software or hardware component which does not meet **GeoDev's** limited warranty, and which is returned to **GeoDev Sarl**, with a copy of proof of payment. This limited warranty is void if failure of **the Software** or hardware component has resulted from accident, abuse, or misapplication. Any replacement of software or hardware will be warranted for the remainder of the original warranty period or 30 days, whichever is longer.

NO OTHER WARRANTIES.

YOU ACKNOWLEDGE AND AGREE THAT **ZSOIL** IS PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS AND THAT YOUR USE OF OR RELIANCE UPON **ZSOIL** AND ANY THIRD PARTY CONTENT AND SERVICES ACCESSED THEREBY IS AT YOUR SOLE RISK AND DISCRETION. **GeoDev Sarl** AND ITS AFFILIATES, PARTNERS, SUPPLIERS AND LICENSORS HEREBY DISCLAIM ANY AND ALL REPRESENTATIONS, WARRANTIES AND GUARANTIES REGARDING **ZSOIL** AND THIRD PARTY CONTENT AND SERVICES, WHETHER EXPRESS, IMPLIED OR STATUTORY. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, **GeoDev Sarl** DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE SOFTWARE PRODUCT, AND ANY ACCOMPANYING HARDWARE.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES.

TO THE MAXIMUM EXTENT PERMITTED BY LAW, IN NO EVENT SHALL **GeoDev Sarl** HAVE ANY LIABILITY (DIRECTLY OR INDIRECTLY) FOR ANY SPECIAL INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS, PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE **ZSOIL**, EVEN IF **GeoDev Sarl** HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

OTHER PROVISIONS.

SUPPORT: If included in license price, assistance will be provided by **GeoDev Sarl**, by e-mail exclusively, during the first year following purchase. This service excludes all forms of consulting on actual projects. Installation support is limited to initially supported OS and a four year duration.

PROFESSIONAL VERSIONS of **ZSOIL** are meant to be used in practice & in research centers.

ACADEMIC VERSIONS of **ZSOIL** are meant to be used exclusively for teaching and research in academic institutions.

ACADEMIC WITH CONSULTING VERSIONS of **ZSOIL** are meant to be used exclusively for teaching, research and consulting in academic institutions.

The terms of this agreement may be amended in the future, by **GeoDev Sarl**, when necessary. In such cases the revised agreement will be resubmitted for user approval on the software's front screen.

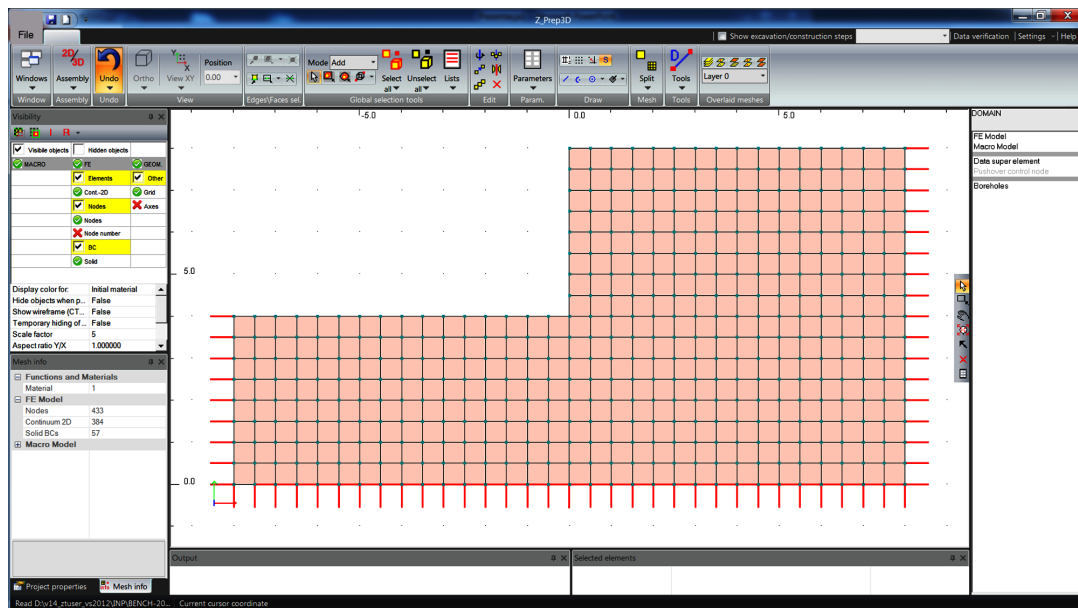
APPLICABLE LAW AND JURISDICTION THIS AGREEMENT IS GOVERNED BY THE (SUBSTANTIVE) LAWS OF SWITZERLAND, ALL DISPUTES ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR THE USE OF ZSOIL SHALL EXCLUSIVELY BE SETTLED BY THE ORDINARY COURTS OF CANTON DE VAUD (ARRONDISSEMENT DE LAUSANNE)

LAUSANNE 15.11.2025

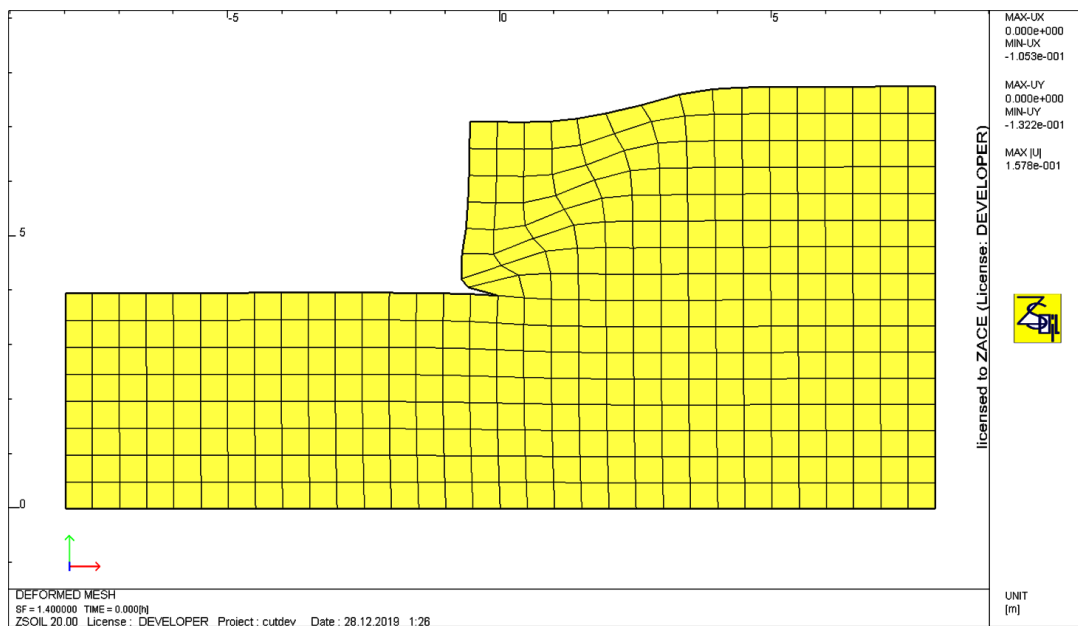
©2022- GeoDev Sarl, Lausanne, Switzerland

Getting started

This little tutorial is here in order to get you acquainted with the ZSoil[®] environment.



- Move to File/Open (which means choose the Open option in the File menu)
- In the "inp/DataPrep" directory, choose the "cutdev.inp" file and open it. This example includes stability analysis of a vertical cut
- Move to File/Save As ... and give a new name (for instance "myfile") so that you'll be able to modify freely the parameters of this analysis without destroying the initial data set
- Move to Assembly/Preprocessing. You will see the finite element mesh in ZSoil[®] graphical preprocessor
- To quit the preprocessor move to File/Exit without saving
- Then, back in the ZSoil[®] environment, move to Analysis/Run Analysis. This will start the safety analysis for the vertical cut. The analysis will fail for a safety factor of 1.4
- Move to Results/Postprocessing option. You will enter ZSoil[®] graphical postprocessor. Move to Results/Deformed Mesh to see the failure mechanism. Choose Exit to get back to the ZSoil[®] application



- You may now move to Assembly/Materials and try to change the soil parameters. Then, move again to Analysis/Run Analysis to see the influence of your changes on the safety factor and to Results/Postprocessing to visualize failure pattern