

The National Institute for Occupational Safety and Health (NIOSH)

Mining Product: Ground Support Factor of Safety Calculator

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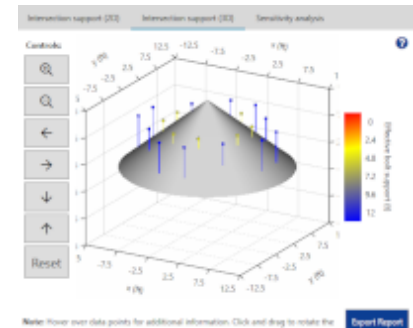
The Ground Support Factor of Safety Calculator software calculates deadweight factor of safety (FoS) for an underground mining excavation's ground support design based on user inputs and methods described by Pakalnis [2008, 2014]. Both two-dimensional (2D) design and 3-dimensional (cone) options are available for drift and intersection design, respectively.

Limitations

The software is intended for the static design of rock reinforcement (cables and rockbolts) against estimated deadweight rock loads. It does not consider ground deformations or more complex loading mechanisms. Also, this design methodology does not consider surface support for the ground between rockbolts. This method was developed through experience in weak rock mass "hard rock" mines, at shallow to moderate depths. In the U.S. it has been successfully implemented at depths less than 4000 ft. below ground surface. The applicability of this design methodology outside these conditions has not been assessed. User should consult available published surface support design methodologies for such guidance.

Installation Notes:

- Download and unzip the installer to a local folder.
- Open the Installer folder and run **GroundControlFOS_Setup.msi**.
 - Check the ReadMe.txt for details on installation requirements.



Software (Windows) - February 2022

Version: 1.1.11

[Download ZIP \(65.48 MB\)](#) 

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