

GRINDSTONE™ – Effect
Simulation Software

Optimize ability.
Maximize effect.

Deviation of gun barrel

250.0 165.0 0.0 Initial velocity

$$N(m) = \frac{M_0}{2M_k} e^{-\frac{m}{M_k}}$$

220 Firing rate (shot/min)

$$\nabla \times H = J + \frac{\partial D}{\partial t}$$

4.0 Idev. Side, dev. Height

$$g = \theta \cdot v \cdot m^{\frac{1}{3}}$$

Warhead type
'BDW_573P_A51'

$$\nabla \times E = -\frac{\partial B}{\partial t}$$

BAE SYSTEMS

Base your actions on reliable empirics

Years of knowledge, test firing and advanced calculations provide you with the software you need to sharpen your systems to reach the next level. The effect simulation software GRINDSTONE from BAE Systems Bofors is a smooth, confident, and cost-efficient way to get the best possible effect on every target. Today and tomorrow.



GRINDSTONE™ adds new possibilities

GRINDSTONE is a unique software used to simulate, analyze, and assess the effectiveness of one or more weapon systems. It can simulate many different threats and scenarios, and then analyze the result and effect of different systems. The software gives you knowledge that would otherwise require a large number of advanced live firings and mathematical calculations. GRINDSTONE gives you the opportunity to:



Sharpen your weapon systems

GRINDSTONE sharpens your weapon systems and brings them to a whole new level. Thanks to simulations you know exactly how to use your systems in the best way possible to maximize effect. The software gives you the knowledge you need on different types of targets and scenarios. You also have the ability to store information on new threats in the database.



Develop methods and doctrines

The software allows you to test different settings for your weapon systems and study their effects on targets. This gives you the information you need to develop and improve your methods and doctrines. For example, you can test how your ammunition works in different scenarios and in a very cost-effective way evaluate existing methods against new types of threats.



Optimize tactics and combat techniques

With the help of GRINDSTONE Effect Simulation Software, you have unlimited opportunities to test different tactics and techniques. As a result, you can identify gaps in your current tactics, discover weaknesses in the enemies' tactics, and learn how to respond to new threats.



Educate officers and specialists

GRINDSTONE takes you to the next level when it comes to training officers and specialists: by simulating different situations and products, you directly see how each component of the system and each change affects the outcome. For example, you can compare how different types of ammunition behave against different targets in different scenarios, or understand how to best position the units to optimize effect in target.

Threat vulnerability analysis

Analyze the target's vulnerability and find the weak spots of your enemy's technical equipment.

Effect in target assessment

Exploit the target's weaknesses to optimize your own systems. See what effect your weapons have when using them in different ways – and adapt to maximize it.

Scenario analysis

By adding different layers, as behaviors, terrain, weather conditions and other external factors, and the impact they have on the scenario, you'll be more than ready to act successfully against your enemy.

Close to reality

With GRINDSTONE you get access to our unique expertise on our weapon systems and ammunitions. Information that we have gathered over years of innovative development work, thousands of live firings, and numerous of advanced calculations. Everything is processed using a secure, well-proven method then stored in our own software. The same software we use when developing our systems and products.



High-detail models

Unique models of warheads and targets with high resolution and high level of details.



Information security

- No network connections.
- Grindstone can be used as a standalone product for highest possible information security.

User-friendly software

- GRINDSTONE is a user-friendly, highly customizable, easy-to-use software.
- Another beneficial aspect to keep in mind is that you don't need to invest in any advanced equipment – a regular laptop is sufficient for most use cases.
- Implementation and training – optional, not included.

Upgradeable

- With an active subscription you will always have access to the latest version of GRINDSTONE.
- Subscription also gives you access to new releases and features.
- We will help you with installation and make sure that the software is up to date, on site or online.

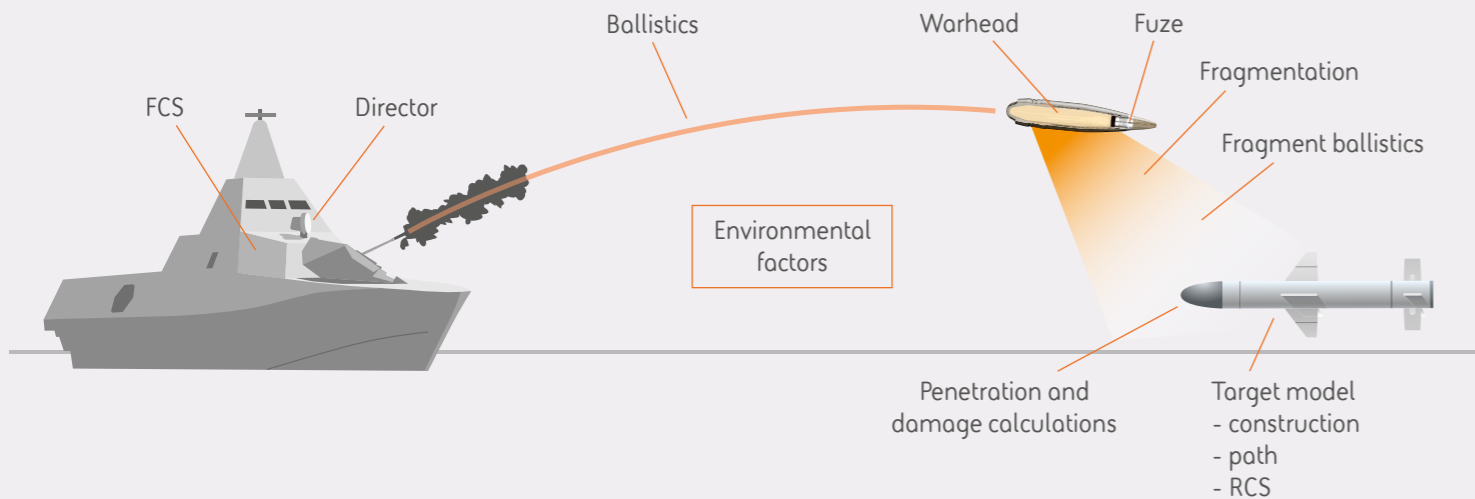
How it works

System simulation

Grindstone simulates the entire kill chain, from detected targets down to the effect in a specific component in a 3D model.

A wide range of parameters can be configured to match your system, your target of choice and preferred scenario.

By altering parameters such as the material, the protection level of a specific part of the object or the speed and direction of your target you will get direct information about how the changes affects the result.

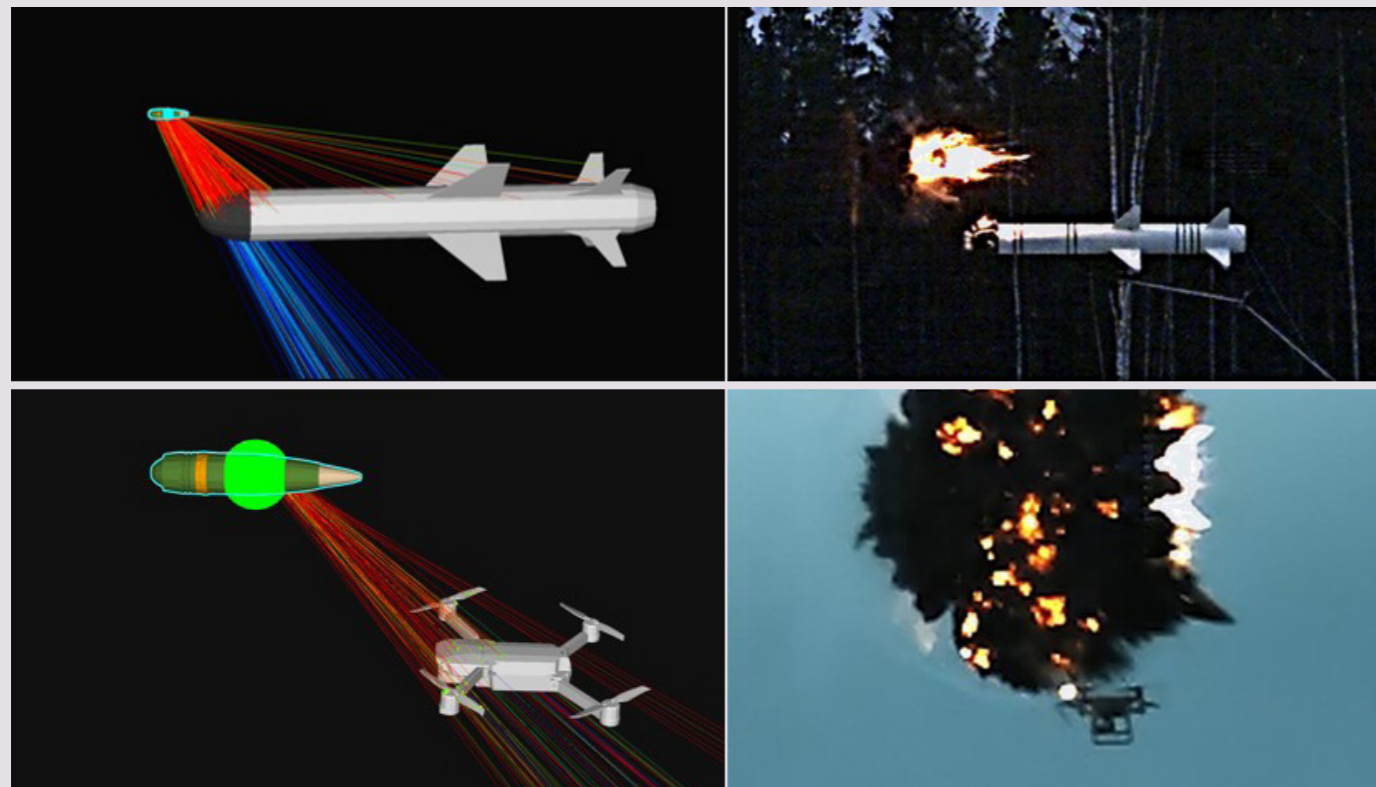


Verified by live firings

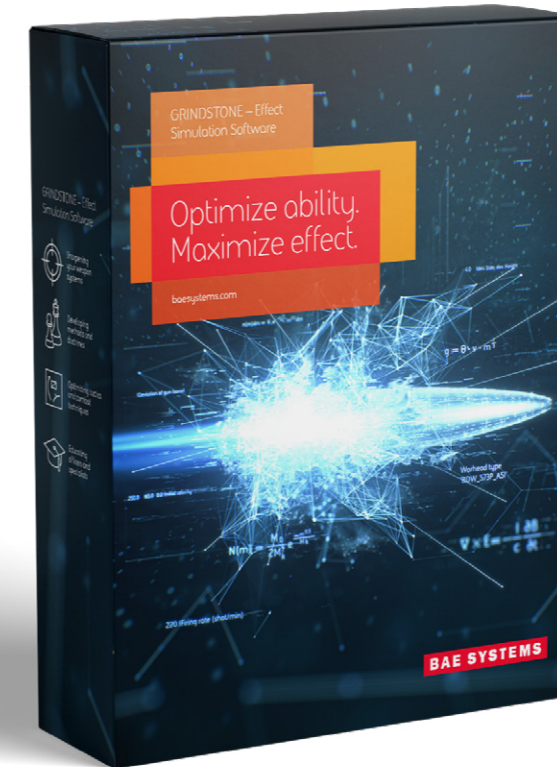
Fragments dispersion, proximity fuse effects and ballistics are all verified by numerous live firings.

Grindstone model with vital components exposed

Live firing for verification of model



GRINDSTONE™ – Effect Simulation Software



Features

- Threat vulnerability analysis
- Effect in target assessment
- Scenario analysis
- Detailed models
- User-friendly software
- No requirements for advanced equipment, a regular laptop is sufficient for most use cases
- Active subscription – always access to the latest version
- Possible to import your own 3D Models and edit them in the object editor
- No network connections. Used as a standalone software for high information security
- Implementation and training – optional

System requirements specifications

- 64-bit (x64) processor
- Windows 10 operating system or above
- Minimum 4 GB, recommended 16 GB RAM
- Graphics card supporting OpenGL 4.6

GRINDSTONE™ Analysis Service

GRINDSTONE also stands for the freedom to choose. In addition to the option that you analyze the results yourself after a brief introduction and start-up, you can also choose to let us at BAE Systems Bofors handle the analysis work – of all or parts of the material.

Which option suits your needs?

1. You analyze the material from the simulation entirely by yourself.
2. BAE Systems Bofors analyzes selected parts of your material.
3. BAE Systems Bofors analyzes all your material and delivers a thorough technical report tailored to your needs and questions.

Do you want more information about the different alternatives? Please contact us.





Contact

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