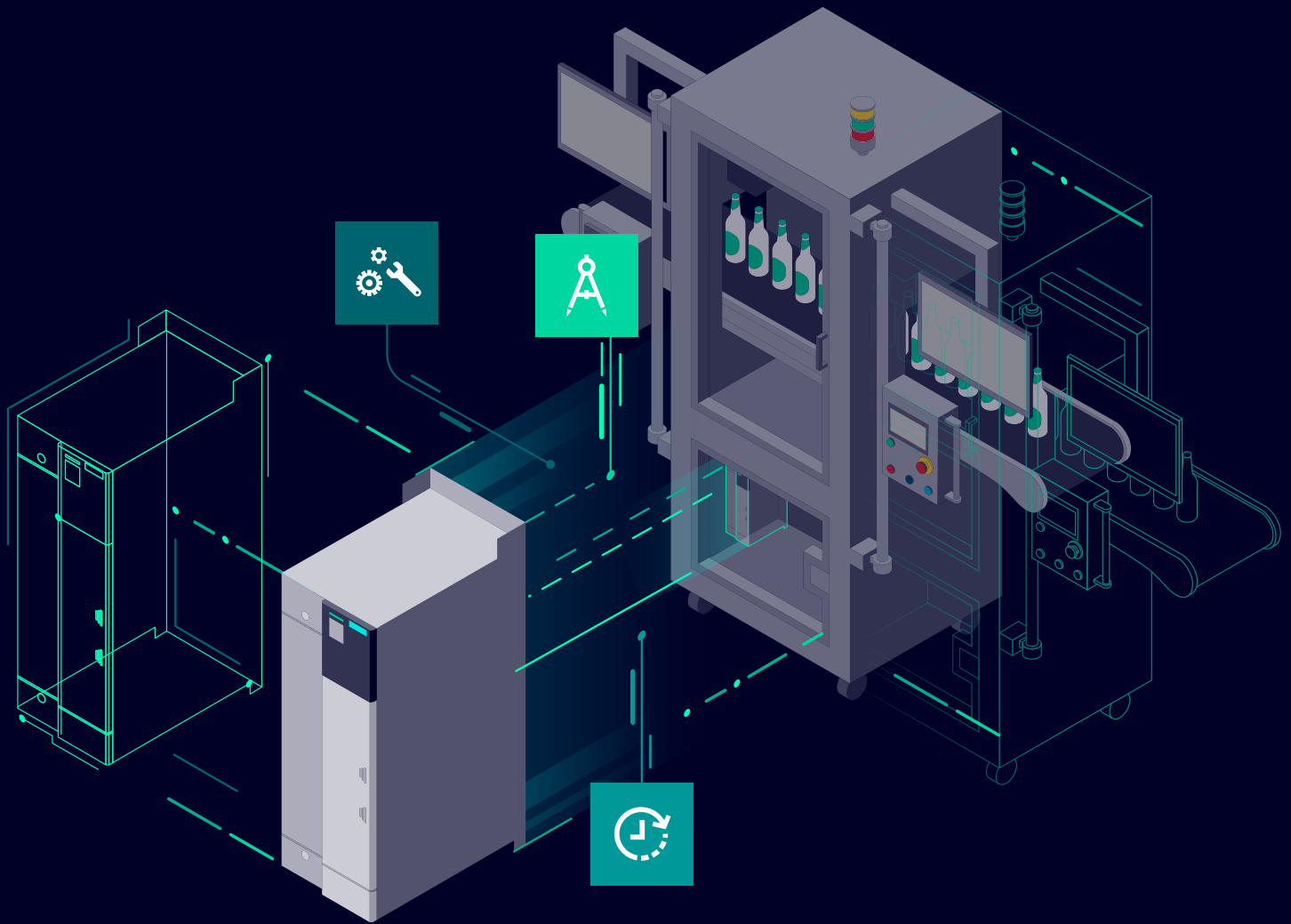


SIEMENS



DRIVESIM FAMILY FOR SINAMICS DRIVE SYSTEMS

The next level of drivetrain design

[siemens.com/simulate-drivetrain](https://www.siemens.com/simulate-drivetrain)

DriveSim Family – two powerful options



With two powerful options to choose from – DriveSim Designer and DriveSim Engineer – the **DriveSim Family** is the ultimate solution for designing, simulating, virtually commissioning, and optimizing your drive system. Thanks to its intuitive interface, you can quickly set up, configure the digital twin of your SINAMICS, and start simulating different operating conditions and scenarios. By adding the virtual SINAMICS to your machine simulation, you can speed up your design and engineering phase while improving machine quality and robustness.



DriveSim Designer

Comprehensive simulation models for complete machines, plants, or processes oftentimes require exact models of drivetrains as a main actor. With the flexible and model-based simulation software DriveSim Designer, you can simulate, adapt, and optimize specific drive combinations and their behavior in complex machines and systems even before a definitive drive selection has been made.



Easy model exchange for efficient collaboration

In DriveSim Designer, the models are validated and tested against real SINAMICS drives and are available in the form of a standardized Functional Mockup Unit (FMU). Therefore, they are compatible with various standard time-based simulation programs such as SIMIT, Simcenter Amesim, ANSYS Twin Builder, MATLAB Simulink or Hopsan. DriveSim Designer is the missing puzzle piece in your comprehensive simulation model.



Consistent model-based development process

DriveSim Designer is another element in your engineering toolbox. Together with other virtual solutions from Siemens, e.g. SIMATIC S7-PLCSIM Advanced or NX Mechatronics Concept Designer, a consistent model-based development process can be implemented.

Built-in mechanical models

DriveSim Designer includes internal mechanical models, such as a two-mass oscillator, and supports connection to external mechanical models.

Systematic simulation solution

A special Simulation Model Generator (SMG) feature enables the user to automatically fill the DriveSim Designer parameters in SIMIT using existing parameters/information from a TIA Portal project.

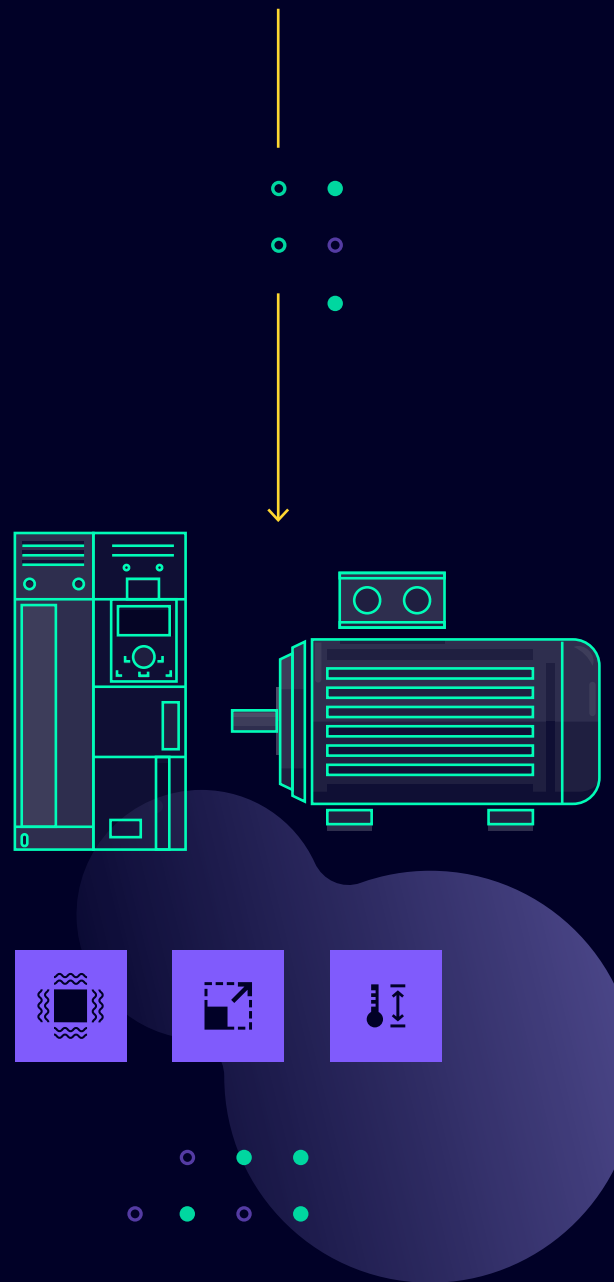
Realistic drive configuration

Ability to configure the available drive parameters as you would configure your real drive.

Typical use cases for DriveSim Designer

The digital twin of the machine combines three different simulation models:

- Dimension and size the correct drive and motor for your application in the design phase
- Validate PLC program in interaction with your SINAMICS drive
- Combine the application and automation models with a realistic drive system behavior





DriveSim Engineer

Virtual SINAMICS: complete digital twin of the NextGen SINAMICS drives designed to achieve realistic results through virtual commissioning. DriveSim Engineer is an innovative, software-in-the-loop solution which combines drive simulation and virtual commissioning. NextGen SINAMICS and DriveSim Engineer offer unique possibilities and bring drivetrains to the next level. This powerful combination lets you optimize your drive systems, test and validate your projects, ensure your drive systems function properly before installation, and virtually commissioning them all seamlessly embedded in TIA Portal and SINAMICS Startdrive.

Software-in-the-loop simulation

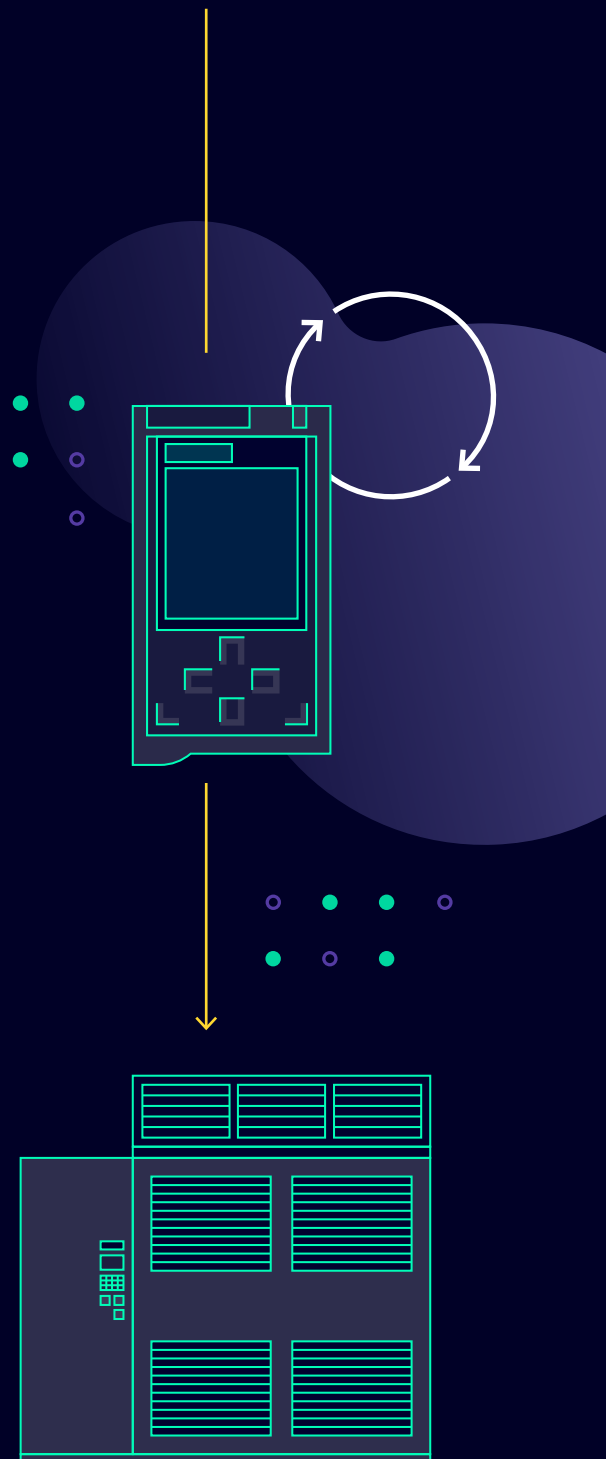
The use of a complete digital twin of the real SINAMICS firmware of the NextGen SINAMICS drives ensures that all parameters and configurations are identical to those of the real drive. This provides unparalleled accuracy and reliability.

TIA Portal (Startdrive) integration

DriveSim Engineer is a seamless part of your commissioning experience, eliminating the need for additional simulation tools, thanks to its integration with TIA Portal (Startdrive).

Compatibility with virtual PLC

The connection of DriveSim Engineer to the SIMATIC S7-PLCSIM Advanced virtual controller is currently under development. Soon you will be able to simulate and virtually commission your machine from automation to mechanics.



Not limited to Siemens motors

DriveSim Engineer also supports virtual commissioning with third-party motors.

Virtual educational trainings

Virtual educational trainings without any potential harm to the respective hardware equipment.

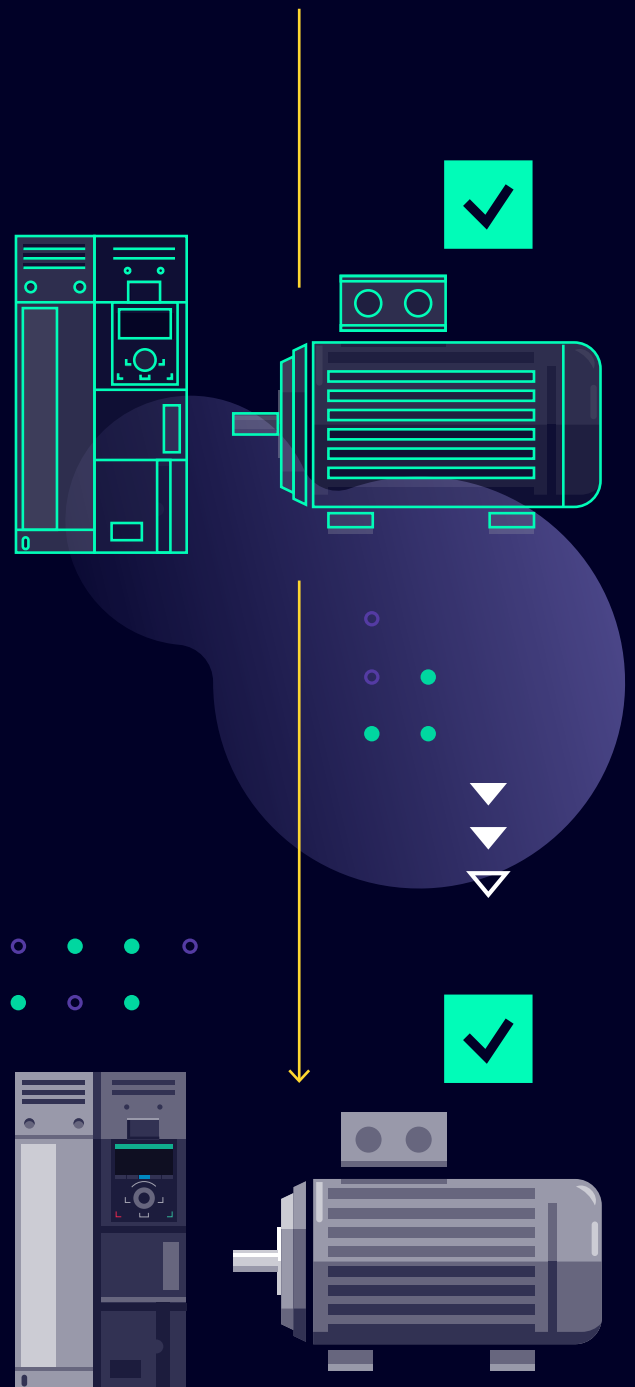
Enhance safety

Virtual engineering and commissioning reduce the need for on-site visits, improving safety by minimizing human exposure to hazardous environments and save costs.

Typical use cases for DriveSim Engineer

Profit from using a complete digital twin of the SINAMICS drives:

- Virtually commission and engineer SINAMICS drives in advance
- Virtual training and demonstration of the NextGen SINAMICS drives to engineers and new users
- Optimize the real machine by eliminating problems in the drivetrain with the help of the digital twin



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