



TESCAN Essence™ 3D Collision Model

Unique standard software module for collision prevention when moving your samples and retractable detectors.

The sample navigation process may involve movement of both the sample stage and retractable detectors as well as tilting the sample to the required orientation for analysis. Any of these hardware adjustments can be risky when samples with different shapes and sizes are being investigated. The Essence™ 3D Collision Model replicates the chamber interior and stage and detector motion, creating a virtual model that prevents collisions and helps users to adjust hardware positions for collision-free movements.



▲ TESCAN Essence™ 3D Collision Model with custom-integrated 3rd party EBSD camera intercepts potential collisions of the sample with the camera*

Key benefits:

- ✓ **Remove the anxiety of potential collisions between samples and chamber hardware** by creating a 3D virtual model of the samples inside of the chamber with standard, integrated, easy to use TESCAN Essence™ 3D Collision Model.
- ✓ **Execute live, real-time stage movement confidently and avoid collisions** between your samples and detectors thanks to the accurate 3D replication of the samples, chamber interior and movement actions, and visual warnings of an impending collision.
- ✓ **Survey to find the best viewing angle for your samples when using complex hardware such as tensile or heating stages** by utilizing your choice of several viewing modes available in the virtual 3D replication of the chamber.*
- ✓ **Create a unique virtual 3D model for each investigation** by entering sample size, geometry, and position to replicate the exact chamber interior and sample movement path and assess the risk of collision.
- ✓ **View sample and stage movements in the virtual model from up to five different angles** without the need for multiple chamber mounted cameras.
- ✓ **Perform advanced analytical work requiring special geometry setup with confidence** by incorporating any chamber mounted detector – EDS, EBSD, 3rd party detectors, or even devices like tensile or heating stages—in your virtual model.*

**Compatibility only applies to 3rd party options already integrated in the Essence™ 3D Collision model. Consult your local sales representative for a list of integrated devices.*