



# Configuring a New Geometry in TRIOS Software™

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The **Geometry Wizard** is used to configure and define the parameters for each geometry used with the instrument. You will need to create a geometry file for each measuring system (geometry/environmental control system) you have, before using it to run an experiment. You can also create separate files for the same measuring system if, for instance, you want to apply different gap values or other settings to the same geometry.



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Note: Parameters that are chosen will vary based upon the selected geometry type. Follow the instructions on the Wizard for your geometry.

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Follow the steps below to configure a new geometry:

1. Mount the desired geometry. See “Installing a Geometry” in TRIOS Help for details.
2. Start the TRIOS program if it is not running already. Select **Home > Geometry toolbar > New** (geometry). The Geometry Wizard will appear, listing the currently available geometries.
3. Select the Geometry type and click **Next**.
4. Follow the prompts and enter the geometry information. For example, when setting up a Cone and Plate geometry, you will need to enter the cone diameter, cone angle, and cone truncation. Click **Next** to proceed.
5. Enter the geometry constants, if desired, then click to **Next** proceed.
  - The gap temperature compensation value may be determined experimentally. Alternatively, use a nominal value. See “Performing Geometry Gap Temperature Compensation Calibration” in TRIOS Help. Select the check box if you want to maintain the gap constant during temperature changes.
  - Enter the compliance values for the upper and lower geometry. The inertia value is entered for the upper geometry only. Enter the compliance values for only the installed test geometry, i.e. if the FCO is installed, enter a compliance value for the upper and lower test geometry; if an environmental system with no test fixture mounted directly to the motor shaft is installed (e.g., Sealed Fluid Bath, Peltier Plate, etc.), enter a compliance value for the upper test geometry and a compliance value of zero for the lower test geometry.
  - See TRIOS Help for a spreadsheet that contains the inertia, compliance, and gap compensation data for the majority of the ARES-G2/ARES tooling.
6. Modify the geometry **Name** if desired and record any additional information in the **Notes** section. Click **Next** to proceed. The name given here will become the displayed name within the Geometry Manager. If you have more than one environmental control option, its recommended that you enter a descriptive name for the same geometry type.
7. The parameters have all been entered and the geometry setup is complete. Click **Finish**. The new geometry is created and will be added to the Geometry Manager. The geometry will also appear as an available geometry through the **Geometry** bar on the Experiment pane.
8. Repeat this procedure for each measuring system combination.