An Exploration of 3D Model File Types

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Transitioning from 2D to 3D Model File Types

Groschopp Inc. says what 3D solid model file type to useAfter selecting a motor or gearmotor from a vendor, it is important to know what the motor will look like when placed within the application to ensure the chosen motor will fit. Years ago, the popular way to view a gear motor was a 2D PDF or 2D drawing. While many manufacturers still offer this format, the industry has been moving away from 2D drawings and the use of 3D solid models is emerging. 3D models give an engineer or product designer a more comprehensive view of the motor they have selected and the ability to view it from many different angles. It also affords the designer a chance to visualize the spatial configuration of their application.

As the use of 3D modeling technology grows in popularity, there is some confusion on what file types are the most useful. There are many different formats or file types of 3D models, but typically the file types can be broken down into two main categories:

- Universal File Types
- Native File Types

Universal file types include IGES (.igs, .iges) or STEP AP203/214 (.step, .stp) files. Native file types are affiliated with specific software programs, for example, the native file for SolidWorks® is Parasolid (.x_t, .x_b, .xmt_txt, .xmt_bin).

One benefit to using a universal file type is that it allows for easy viewing. The designer does not have to use a certain software program in order to the view the 3D file. On the other hand, the use of a native file type allows a designer to insert the solid model directly into a live, in progress, design with minimal interfacing. If a designer is using a non-standard CAD system it might be wise to ask for a universal file type instead of a file type that pertains to a particular software program.

Groschopp offers 2D and 3D models in a variety of formats under the "downloads" tab on every product page.

>> **You have the drawings, now what?** Read more about motors and motion control solutions.