

**Dimensioning:**

The Machine Layout Drawings (MLD), found on the Haas Automation website [www.haascnc.com], contain the travel limits for each machine model. You can use these dimensions to constrain the model as desired. The model will import with the origin in the center of the spindle.

**File Naming Convention:**

Haas provides machine models in both STL (Stereo Lithography) and X\_T (Parasolid) formats. The files for each model are contained in a single ZIP file. The files must be extracted to use. The ZIP file name contains the machine model, tool changer type, file type and release date.

**Model\_ToolChanger\_FileType\_ReleaseDate****Examples:**

VF-3\_S\_STL\_2012-11.zip is a VF-3 with a side-mount tool changer in STL file type, released Nov 2012

VF-3\_U\_XT\_2012-11.zip is a VF-3 with umbrella tool changers in X\_T file type, released Nov 2012

**Formats:**

Stereo Lithography (STL): STL files are for CAM simulation. These files are triangle-based geometry and can be used in virtually any CAM system. To use these files, follow the software company's instructions for machine simulations. The basic format is a tree-system of static parts and moveable axes built from the ground up. An XML or similar file will tie the STL files together within a given CAM system; these are created by the end-user or distributed by the CAM company.

Parasolid (X\_T): The X\_T files are for CAD engineering. This is a single file that can be interpreted by a CAD system. For example, SolidWorks will unzip the X\_T file and create a new assembly file, and import each component into a new part file. These files can be used for applications such as fixture design and robotic integration.

**Side-Mount Tool Changer:**

There is a red cylinder below the side-mount tool changer; this serves to represent the travel of the tool changer arm. The optional 40 pocket tool changer is excluded because it does not interfere any further than the standard tool changer.

**Mill Workholding:**

No workholding is included. Individual workholding vendors can provide models of workholding.

**Lathe Workholding:**

Lathe models have multiple chucks included to cover the various models, i.e. ST-20 and ST-25

**Lathe Turrets:**

The available turrets are included and made visible to simplify the number of downloads required; simply hide or remove the unneeded turrets.

\*\*\*\*If you have read this document and still have questions, please send an email to [kfoulks@haascnc.com](mailto:kfoulks@haascnc.com)