Upper Structural Side - WA-030-S

In Context

The important aspects of this part to remember is where the timing belt will fastened and where the ends of the y-axis will connect.

As can be seen on the illustration, this part would inhibit travel on the y-axis if the section that the bearings travel along the rails is not removed. The connection to the y-axis rail support ends have a groove as opposed to a single hole. This is to enable adjustment so the router or deposition tool will be perfectly parallel with the table (eliminating the need to face the table surface). These grooves are optional.

The top two holes are used to fasten a steel plate to hold the timing belt, therefore the top and bottom of this section are important to maintain a good alignment of the timing belt to the drive pulley.

The purpose of this structural part is to provide the structure to the Y ans Z axes. The multiple holes shown in a regular distribution allow the Y axis be lowered for CNC work or raised for 3D printing work. By lowering the y-axis, the structure will have more stability along the z-axis. Raised, the y-axis can permit a very high plastic model to be formed, which does not require the same level of stability as machining. This part has many dimensions that can be modified. The constraints that should remain for functionality include the areas that the y-axis v-groove bearings will need to passed, and the upper and lower part of the two top holes around which the timing belt will be wrapped..