The laser tool head will be mounted in movement platform built following the Core X-Y movement theory. Core X-Y is a derivative of the Cartesian movement theory where the axes of movement are rotated 45 degrees from the X and Y axes. This allows for minimizing backlash and maximizing precision while only slightly adding to the complexity of the design.

The motion platform will consist of two stepper motors, several linear rods, linear bearings, belt runs, and pulleys. These will be attached to a main gantry plate, made of aluminum or similar material, which will be CNC machined for precise mounting of all of the components. Our main goal for the size of the gantry would allow the dimensions of the build area to support an A4 sized sheet of paper.