

Abstract

The improvement of the current assembly of the motor and casting components for the Haas UMC-750 5-Axis vertical CNC mill includes the evaluation, development and proposal of a new pair of material handling carts. To meet these deliverables, a student team began by assessing the assembly workstation, defining the problem to be solved, researching ergonomics in material handling equipment and drafting the final design of the improved cart models using SolidWorks.

The final design considered the initial improvement request from the client, as well as better ergonomic features to enhance the safety of the operators. It was estimated that the new design can provide Haas Automation with savings in material cost and production of the cart. At the same time, by improving the design, the new carts reduce risk of employee injury by decreasing the use of an overhead crane for assembling the motor components. The SolidWorks models and engineering drawings will be presented to Haas Automation in the hope of a future implementation.