

Concept Development

Development sketches for individual features can be seen in Figure 39 through Figure 42. Concept development sketches can be seen in Figure 43 and Figure 44. The main difference between Kee Klamp 1.0 and Kee Klamp 2.0 is that the latter uses a mixture of steel and aluminium tubes, and of cast iron and cast aluminium clamps, in order to combine the strengths and avoid the weaknesses of the Kee Lite and Kee Klamp concepts. Thereafter, the concept is developed with a view to find a viable solution which is fully adjustable. This was accomplished in concept 2.4, and the design was then streamlined to form concept 2.5. Note in particular the evolution of the geometry and the head tube/headset bearings as the concepts are developed.

Concept 2.4 and 2.5 were both selected as final concepts, as it was decided that the adjustability added so much complexity, weight, and cost to the design that it was worth developing one “Design for Adjustability” concept and one “Design for Performance” concept. These two concepts were evaluated against the same criteria as the initial concepts, and outperformed them all, as expected.

Embodiment Design

Final Concepts/Initial Layouts