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The Design of a Volume Control System for the Quooker Tap

“Design a volume unit as an addition to the current product system, which will allow the user to control boiling, chilled and carbonated water volumes.”

The design of a volume control system aims to enable users to regulate boiling, chilled, and carbonated water volumes. The project considered user interaction at the tap and functionality below the counter to control water volumes from both the user side, as well as the tap and reservoirs. With this unit, the user doesn’t have to wait next to their tap when filling big amounts of water, while also avoiding the use of measuring cups and other devices. For Quooker, the unique selling point of this system lies within an opportunity for previous customers to return to Quooker to upgrade their systems.

The three main drivers of this design include performance, ease of use and compatibility. The system allows the user to select water volumes through a pie chart on an external knob. This way the users can create mental associations between relative water levels in their pots and pie chart segments. The flow is controlled from bellow with a turbine flow sensor at the inlet of the system. By taking into account system limitations such as the bellow tank in the Quooker and the different properties of special water, the water is dispensed at a flow rate of 2-3L/min with an accuracy of 97-98%.

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