

# ***DESIGN AND CONSTRUCTION OF A PNEUMATIC BASIS OF GOODS SEPARATION EQUIPMENT BASED ON WEIGHT AND COLOR***

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## ***ABSTRACT***

*The design of this tool aims to reduce errors in sorting weights and boxes. The existence of this automatic system makes it more accurate in sorting boxes. Meanwhile, with the manual system, errors often occur in sorting the weight and color of the boxes. This tool uses a load cell sensor to weigh the box, a TCS3200 color sensor to detect color, and a proxy sensor to detect the distance of the box. Based on the tests that have been carried out, this system shows performance that is in accordance with the initial design. Testing includes calibration and experiments on the load cell sensor, TCS3200 color sensor, proximity sensor, and LCD display. Results: When using the Load Cell sensor as a scale, from 3 responses there was an error of 1,86 % compared to conventional scales. Testing shows that this system is 50 % functioning properly according to the planned specifications.*

***Keywords*** : Load cells, TCS3200, proximity