

# ***DESIGN AND CONSTRUCTION OF A COUNTER AND SORTING SYSTEM BASED ON PNEUMATIC BASED BOX DIMENSIONS***

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## ***Abstract***

The use of electronic device technology and microcontrollers, such as the Arduino Uno, offers efficient solutions to various challenges in industrial automation. The design of this tool aims to reduce errors in calculating the height and low of boxes. The existence of this automatic system makes it more accurate in counting boxes. Meanwhile, manual systems are often An error occurred in the box calculation. Arduino Uno is an open-source platform that supports the development of various electronic projects, including automatic goods counter systems. This system operates by pressing the start button, which activates the entire circuit. The conveyor will carry the box to the sensor. The proximity sensor detects the presence of the box, while the ultrasonic sensor measures the size of the box to determine whether the box is large or small. The sensor measurement results are displayed on the LCD. After the counting process, the cylinder activates to push the boxes out of the conveyor. This process continues until the stop button is pressed, which will disable the entire system. From 10 trials, this system succeeded in detecting large and small boxes with 100% accuracy.

Keywords: Box, measurement, sensor, cylinder