

ecosmart touchless Paper Towel Roll Dispenser

The Need for Redesign

There are several ubiquitous designs of paper towel roll dispensers, which primarily differ in the control employed to dispense paper. Popular designs are:

Manual controls, namely levers, cranks and push paddles.

Drawbacks: Hygiene
Paper wastage

Touch-less pull-paper manual dispensers, such as the those popularized by Kimberly-Clark Professional.

Drawbacks: Inconvenient since both hands are needed
Reversion to manual control when paper doesn't appear
Paper wastage since paper size is fixed

Sensor-based automated dispensers, such as Georgia-Pacific's popular EnMotion range of dispensers.

Drawbacks: Inconvenient because of small area of sensor
Paper wastage, since paper size is fixed that leads to repeated activation



Georgia-Pacific's EnMotion range of Automated Touchless Sensors

The Redesign

The backdrop image is the redesigned ecosmart touchless control for a paper towel dispenser. After washing your hands, simply place them close to the red sensor area, near the bottom of the dispenser. Paper begins to unroll as long as your hand is in the vicinity of the sensor area. Move your hand down or away to stop the paper dispersal at the desired towel length, and tear. Wipe your hands without needing to withdraw more paper.

It's **eco-friendly**, since you only withdraw as much paper as you need. As opposed to simply dispensing a fixed paper size based on if the sensor is activated, the dispenser dispenses until the sensor is deactivated by moving the hand down to tear the paper.

It's **convenient**, since the sensor area is large and is located such that it supports natural motion of the hands to reach out to get paper, as opposed to waving or holding your palm up to the sensor.

Building upon sensor technology used in kitchen and lavatories, it possesses attributes such as being **hygienic** since it is touch-less, but also possesses the drawback of lacking manual-control interaction (interaction relabelling)