World in Motion

Paper towel dispenser cleans up

Not only did product engineers at Georgia-Pacific design a terrific motion-based paper towel delivery system, they say the enMotion automated touchless dispenser just may be "the greatest launch of *any* away-from-home product in history." We're proud to share their design story in the debut of our new department, *World in Motion*, celebrating ideas — and the engineers behind them — that move our world.

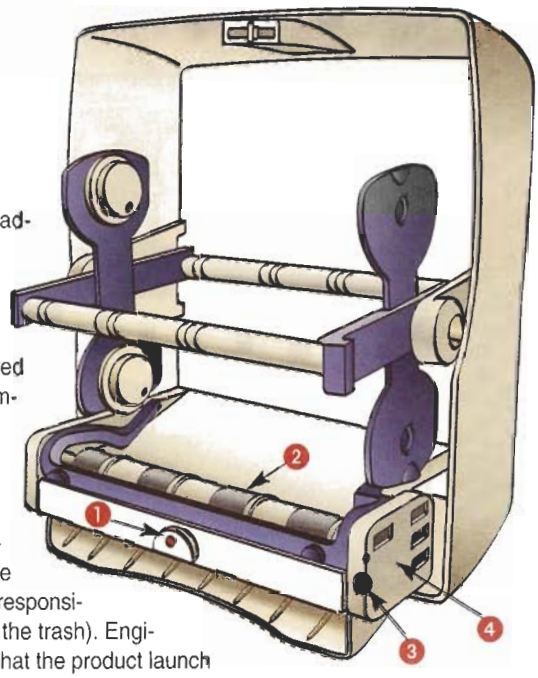
For more information, visit gp.com/awayfromhome.

1— Sensor eye detects hand motion and sends signal to dispense towel

2— Battery compartment holds four D-cell batteries; can be converted to ac power

3— Auto-feed button advances towels without activating sensor

4— Electronic assembly cabinet contains DIP switches with adjustable settings for sheet length, time delay, sensor range, and dispense mode



Back story

As often happens in the world of scientific advancements, engineering teams at two separate companies were working on the same concept at the same time — the idea of a sensor-activated, hands-free paper towel dispensing system. When Georgia-Pacific acquired Fort James in 2000, teams and ideas were combined after the merger to develop the final product.

The new design team set out to create a dispenser that would address two main issues — the importance of hands-free dispensing to overall personal health (less germ contact), and the significance of portion control to environmental responsibility through source reduction (fewer towels in the trash). Engineers had no trouble convincing management that the product launch was a good idea, as everyone agreed there was a need for this type of system. The real issue was overcoming a variety of design challenges along the way.

Design dilemmas

A number of hurdles presented themselves during the course of design. Static electricity was one; radio waves interfering with sensor function was another. Yet a third challenge was convincing the sensor to provide flawless towel delivery in situations it might find confusing — picture a busy airport restroom with crowds of people moving close to the dispenser. The final system addressed all of these issues with specialized components such as housing made of high strength polymers, an adjustable time delay between towel delivery, and an adjustable sensor range for hand-waving activation.

Design impact

enMotion dispensers are now used for paper towel delivery in just about every scenario — hotels, restaurants, malls, airports, grocery stores, workplaces, and more. Immediate acceptance and growth in the marketplace is a testament to the innovative design. Besides the wall-mount model, a wall-recessed stainless steel dispenser is also available, with more advances and variations rolling out soon.

Tech Specs

Weight: 7.8 lb without batteries or paper
Dimensions: 16.6 x 14.65 x 9.75 in.
Materials: High-strength polymer housing
Power source: Four D-cell alkaline batteries; ac adapter available
Adjustable sheet length: 8, 12, and 16-in. settings
Adjustable time delay: 1, 2, or 3 sec between dispenses
Adjustable sensor range: Dispenser activated when hand is waved 1, 2, or 3 in. from sensor
Dispense mode: "On-demand" (towel appears with sensor activation) or "hanging towel" (towel always showing)