

## case study

WaterWerkz > 2005 - 2006

### Packaging-on-demand

Waterwerkz LTD have developed an innovative packaging system, which is powering an exciting new generation of vending machines that can package liquid based products 'on-demand'

The technology enables a high volume of product to be stored in a minimal space and offers significant benefits for businesses and the environment over current practices in vending and packaging.

### Problem

A complex system was needed to enable on-demand packaging to work, this included:

- > Loading and storing up to 2000 pouches
- > Handling of the pouches within the machine
- > Removal of the screw cap
- > Filling of the pouch with drink
- > Replacement of the cap
- > Dispensing the drink chilled.

This required a method of reliably handling the individual pouches, allowing the screw cap to be removed, pouches to be filled, screw cap replaced, drink flash chilled and dispensed all without compromising stringent food standards requirements.

### Solution

The innovative step was to link the individual pouches, creating a long chain that could be loaded and handled reliably by the machines automated processes. This led to a number of unique design steps resulting in the client being able to apply for several international patents.

### Advantages

- > The vending machines have between 4-10 times the capacities of a traditional drinks dispenser.

- > By using just-in-time flash chilling, energy consumption is reduced by up to 80%.
- > Transportation and storage of stock is reduced.
- > The high storage capacity dramatically reduces the number of required restocking visits, increasing operator margins.

### Services

- > Research & Development
- > Industrial Design
- > Concept generation
- > CAD
- > Physical Modelling
- > Intellectual Property Protection

### Links

<http://www.waterwerkz.co.uk>



Final Product



Pouch Handling System



Test Rig