Case Study: SafeLink™ & Safety Secured Hazardous Chemicals

In this case study, we profile the RP Adam Ltd SafeLink™ system now incorporated into Duotek, dosing automatic dish and glass washing products and the company's range of Arpax SC super concentrates vended through the Ecopax chemical to water mixing station.

Duotek 1995
Commercial auto-dish and glass washing uses professional grade detergents which can cause severe skin burns and eye damage if splashed or spilled.

Our challenge was to provide an innovative solution to safety conscious customers, significantly reducing the risk to staff while maintaining the full benefits of using a liquid system. Liquids are far more versatile than powder or soap block systems, with the latter having to be vended on a probe (sensor) basis. This can be fraught with performance problems and very expensive to use if not monitored properly.

RP Adam's original Duotek system was launched in 1995 to secure the Rank contract – at the time, the largest leisure contract in the UK spanning 12 different leisure brands.

Since then, the system has evolved and improved with today's Duotek (Version 4) auto-dosing system utilising SafeLink™ Duraseal Technology, an ultra-safe system for automatic liquid dish and glass washing, which can be fitted on all types of machine either externally dosed or as part of an integral feed. The system utilises a revolutionary safety mechanism in the neck of the flask which forms a leak-proof connection between the chemical flask and the electronic dosing equipment itself.

The Challenge

Many companies have, over the years, looked at providing customers with a safe dosing system for liquid chemicals. Indeed, chemical dosing systems, whether manual dispensing pumps or electronic dosing units, are now a well-established part of most professional cleaning processes.

Some of these have proved successful in certain aspects like fixed caps (known as anti-free pour) but few have been able to combine 100% connectivity with a bespoke anti-leak proof cap device.

As part of our commitment to provide exemplar levels of customer service, RP Adam Ltd (Arpal Group) set to work with our packaging and equipment suppliers to find a solution. The ultimate goal was to devise a lock-in dip tube which once fitted to either a two or five litre flask would fulfil the following wish list:

(1) Could not be easily removed by customer staff.
(2) Did not leak when the flask was inverted or laid on its side.
(3) Was tamper proof.
(4) Showed colour co-ordination between chemical labels, flask inserts and cap connector.

(5) Was easy to load and connect.
(6) Was totally safe for the end-user.
(7) There was no contact between person and chemical.

One of the major issues to overcome was the fact that most people think that a simple 5lt flask is a standard design, which of course it is not. Moulds and flask neck sizes can vary considerably between manufacturer. To ensure a leak-proof seal, our container supplier needed to be heavily involved in the project.

The Solution
We wanted our Duotek dish and glass washing and the Ecopax super concentrates systems to be market leaders in terms of safety. Chris Smith, RP Adam's long-serving UK Operations Manager, was tasked with sourcing technology which delivered the specific requirements outlined above.

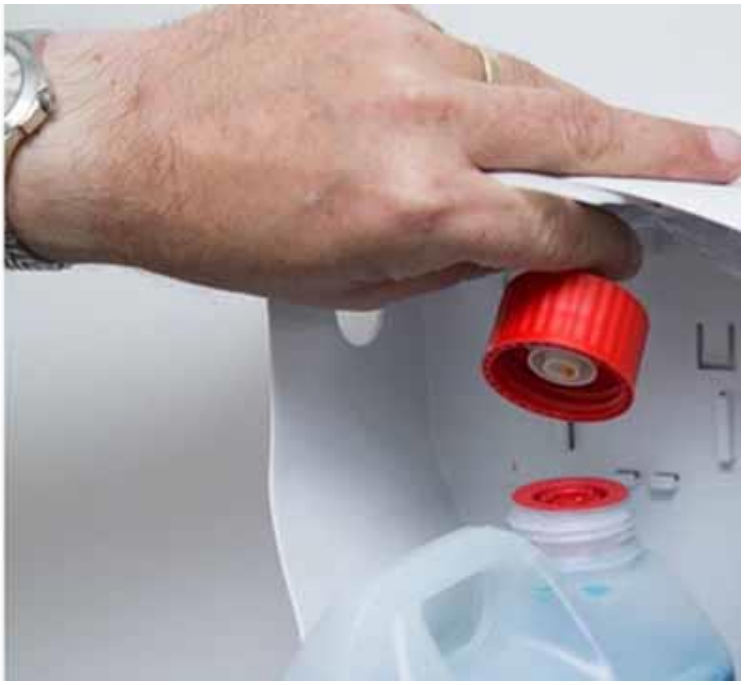
Whilst there were some great ideas out there, nothing completely fulfilled our stringent wish-list. After some considerable time conducting market research, Chris came across an innovative system developed by a US global equipment supplier who was happy to work with RP Adam in adapting their products and dosing technology to fit our specified requirements.

Chris says: "To be honest, what seemed like a simple 'plug-and-go' solution turned into a major development project. There was a never-ending trail of e-mails followed by multiple successive meetings, soft trials with existing customers, errors and failures. Different chemicals formulations can behave very differently when exposed to component parts and having so many stakeholders involved, it was difficult to project manage. Not only that, but it was also a challenge to persuade our packaging supplier to tool us a lower volume bespoke flask which could accommodate the SafeLink™ device. However, we finally

succeeded and devised a brand new version of the standard supplier system which addressed everything we were looking for".

The project exemplified what can be achieved when various interested parties work in collaboration with each other to achieve the same goal.

The system contains a unique safety element within the cap and connection device which now makes automatic dish and glass washing safer than ever before. Moreover, when it comes to day-to-day high volume spray, wipe and mop cleaning and disinfection applications, super concentrates can now be dosed safely and effectively using SafeLink™ providing significant customer savings compared to regular concentrates or standard bulk fill chemicals.



The Arpax SC super-concentrated products all carry multiple hazardous warnings because we decided to put as much into the bottle as possible. One product in particular yields a dilution of 200-1 with water and provides a BS EN 1276 disinfection kill rate of only 15 seconds.

SafeLink™ allows us to concentrate upwards because the system ensures it is safe for the operative to dispense ready to use cleaning solutions without getting close to the raw chemical concentrate solution.

The Arpax SC two-litre products have been devised specifically for the catering, housekeeping and front-of-house departments for the larger chain businesses consuming thousands of litres of product per year.

To further heighten the safety profile, the Arpax SC super concentrates are secured in a locked cabinet alongside the chemical dosing unit. The cabinet can only be opened with a specialised key, ensuring the chemicals are not left out or stored under a shelf.

With a locked store for the chemicals and tamper-proof inserts within the chemical flask, there is no risk of free pouring of hazardous chemicals, no spillages, minimal chance of accidents occurring with the mixing of chemicals, while at the same time providing controlled dilution through the dispenser.

The Results

Since its launch into the company's product range, initially with dish washing liquids, the SafeLink™ system has now become an integral part of RP Adam's tender proposition for large prestigious hospitality and health care groups.

One of our key target markets is the pubs and bars sector. Many of the under counter integral feed glass washing machines currently being used have the chemical containers sitting next to the machine on the floor with an unsecured dip tube in the chemical container. In a busy bar, it is very easy to accidentally kick these over causing significant injury to a member of staff coming into contact with the corrosive machine detergent.

Once the new system was approved, we approached some long-standing customers and in the summer of 2015 the company retro-fitted 120 Young's pubs and hotels with new systems for their glass washing machines and the dish washers in the kitchens. Two years down the line it has been a roaring success.

Young's Commercial Manager said at the time: *"We have been working over the years towards making chemical usage as safe as possible and when we were offered a safer alternative way of dispensing dish wash and glass wash chemicals it seemed the obvious thing to do. The Duotek SafeLink™ system makes it impossible for the operatives to mix up the products and ensures we are offering our customers clean glasses every time – safely."*