Refillable Drum Systems and the Australian Agchem Industry

Back in 1994 very much forward thinking companies like Nufarm Australia were searching for container and dispensing equipment options to move away from the environmental and safety issues associated with single-use packages like the industry standard 20 Litre drum. While the Micromatic Drum Valve had recently become available in Australia, it would not become a practical option until such time as locally produced compatible drums were readily available. Enter the Envirodrum, initially released by BMW plastics in Melbourne in 110 Litre configuration in 1995 and later by Southcorp Packaging, now Visy Industrial Packaging. Both products are blowmoulded drums specifically designed to suit the 2.5" x 5 Drum Valve. They were soon to be followed by a 60 Litre version from BMW.

Today, the 110 Litre Envirodrum is the mainstay of the refillable Agchem container system in Australia with countless thousands in daily use. In time it was joined by other bulk container configurations like Nylex’s rotomoulded 100 Litre Micro Bulk and more recently their 500 Litre IBC, plus other 1,000 Litre IBC’s, but it is the Envirodrum and Micromatic Drum Valve combination which has indelibly changed the Agchemical packaging scene. Used today by the most of Agchem companies participating in the bulk herbicide and insecticide market in this country, the Envirodrum / Micromatic Drum Valve combination has set a new benchmark for safety, tamper and cross-contamination protection and efficiency for chemical users country-wide. It has also spurned a whole new industry of chemical dispensing products, including pumps, flowmeters and a raft of venturi-type volumetric measuring devices, each integrated to take maximum advantage of the closed system properties of the Micromatic Drum Valve system.
While *Envirodrums* were designed to have a useable life of at least five years, history has shown there are many applications where they and Micromatic Drum Valve combination is more than capable of providing many more years of reliable service, with some only recently coming out of the “pool” after ten years of active duty. Over that period, not only has the safety of all users been greatly improved, but massive numbers of smaller single-use containers have not made their way into landfill as a result. Ongoing safe handling, efficiency and significant waste reduction…a win-win situation!

As a follow-on to the shift to the “Minibulk” refillable and returnable concept, larger containers like the 500 and 1,000 Litre IBC are now also enjoying growing adoption. They too are increasingly being fitted with the Micromatic Valve, which further utilizes existing Couplers and dispensing systems. The Drum Valve has certainly changed forever the way Agchemicals are handled in farms across Australia: a major leap forward for safety and the environment.

Summing up after more than a decade of successful use, Matt Sargent, Nufarm Commercial Development Manager, said, “Since Nufarm introduced the *Envirodrum* system with the Micromatic Drum Valve we estimate over 2 million single-trip drums or 2,800 tonnes of plastic have been kept out of landfills. This is a significant benefit to the environment.”

Australian growers have adopted the *Envirodrum* technology rapidly. Over 50% of Nufarm’s herbicide sales are now in refillable drums, all of which are fitted with the Micromatic valve. The system is successful because it has met the needs of growers in supplying a system to reduce operator exposure and improve time efficiency. “Growers can fill their spray tanks quickly and safely, allowing them to get on with their main purpose, applying the crop protection products. They no longer have to lift, pour, triple rinse and dispose of 20 litre drums”, Mr Sargent said.

Mr Sargent also noted, “We find the Micromatic valves stand up to tough Australian conditions well and often outlast the *Envirodrum*. It is not uncommon to get 8 years of service from a Micromatic valve. The one way system gives Nufarm greater peace of mind and significantly reduces the risks of on-farm cross contamination of containers.”

Nufarm is constantly using product and packaging innovations such as the Micromatic valve system to add to its competitive advantage and has allowed Nufarm to achieve the number 1 position in the Australian crop protection market.

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