

KLENZION AGWASH STOCK WASHING SYSTEM

The Klenzion Agwash™ Stock Washing System is a patented process that combines current process equipment to consistently produce visually and microbiologically cleaner livestock.

The Process:

- Stock are passed through the automatic Klenzion Applicator Unit and have the Agway™ product applied
- Stock are held in a holding yard for a period for Agwash™ to act on the visual and microbial contamination on the hide
- Stock are passed through a Klenzion Restrainer Washing Unit (sheep) or an existing plant washing system (cattle) for a potable water rinse and to remove organic loading
- Stock are sprayed with Agsan™ to minimise residual microbial loadings
- Stock must be substantially dry prior to being presented to the slaughter floor.

Potential Industry Benefits:

The benefits of the Klenzion Agwash™ Stock Washing System include:

- Reduced pathogenic microbial loads on the hide surface
- Reduced transfer of harmful pathogens from hide to carcass
- Reduced production stops or slow-downs
- Reduced carcass hygiene trimming resulting in lower costs
- Longer product shelf life
- Reduced water consumption during livestock washing
- An important Critical Control Point in the processor's HACCP quality assurance programme and risk management plan
- Proven excellence against a wide range of meat industry pathogens including E-coli, Salmonella and Listeria
- Environmentally friendly, biodegradable products.

The Equipment

Klenzion Agwash™ Applicator

The applicator unit provides automatic application of the Agwash solution. As the animals pass through the patented device a metered amount of the product is applied. The applicator is positioned in a suitable location so that the product is applied during the course of normal stock movements. The unit is simple and reliable. It has been continuously improved over time to ensure that the Klenzion Agwash™ is applied at the correct rate to the correct part of the animal.

The Restrainer Wash and Rinse System

The patented wash system is designed by Windsor Engineering Group Ltd based on Klenzion's performance specifications. It consists of a marriage between an acknowledged industry standard method of moving stock (in a controlled and automated fashion) and a unique wash system. Stock are conveyed automatically through a wash tunnel where specially placed nozzles firstly wash off the high levels of organic matter and then rinse each animal clean with potable water. As stock exit the Agsan™ sanitiser is applied to further reduce microbial loadings.



The Wash System - Benefits

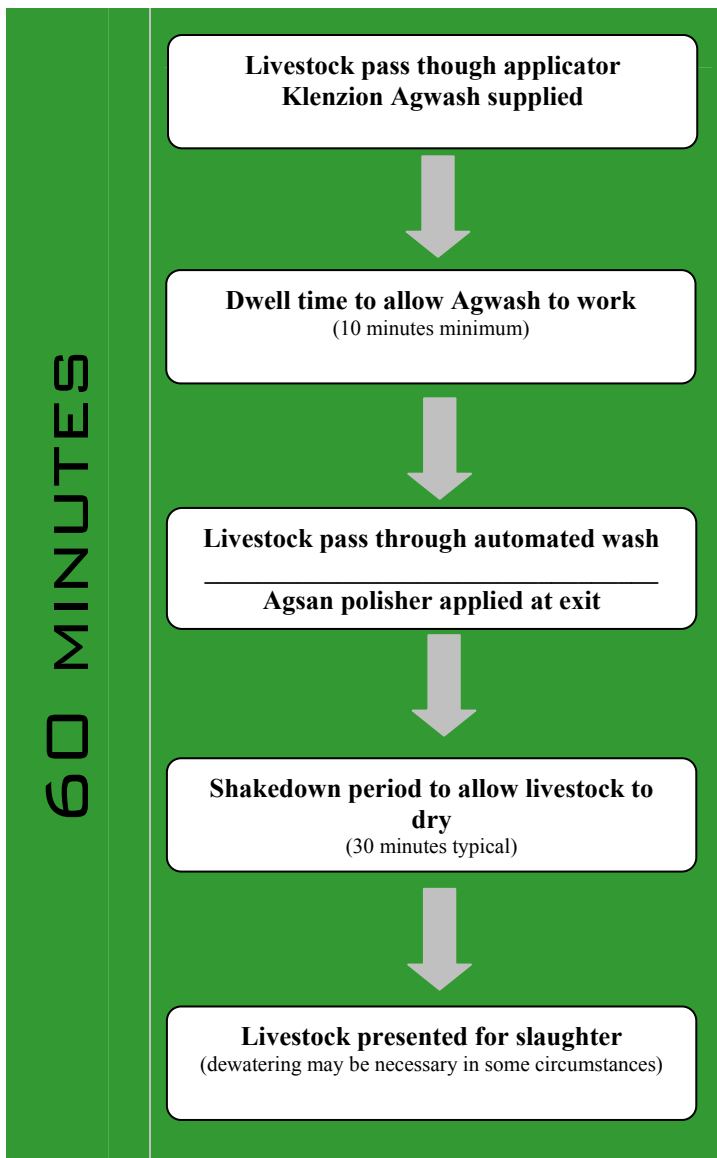
- Fully factory assembled for quick installation
- Variable speed, 5-20 animals per minute for operational flexibility
- Low potable water consumption, around 50 l/animal
- High quality ancillary components provide excellent reliability
- Hop dip galvanised and stainless steel construction
- Removeable covers for ease of cleaning and maintenance
- Controllable wash water application
- Complete system provided, ie all mechanical and electrical components required
- Hydraulic width adjustment option available to cater for varying stock sizes
- Designed for retrofitting into existing yards
- Smaller footprint than most swim washes.



Drying

It is important that stock is "substantially dry" prior to being presented for slaughter. Windsor are currently developing a drying system which will significantly reduce the waiting time from wash exit to slaughter.

The Klenzion Story



Klenzion Ltd, in association with its chemical supplier, Colourlock Industries Ltd, has developed the products, systems and equipment required for effective stock washing.

Over the last seven years Klenzion Limited and Colourlock Industries Limited, have been jointly researching and developing a process to improve the visual appearance and to reduce the microbiological loading of livestock prior to slaughter.

Klenzion Limited now has operational sheep and cattle systems installed at many meat processing plants in New Zealand. There is worldwide interest in the process and expansion into Australia is to commence in 2004.

In 2003 Windsor teamed up with Klenzion to design and manufacture a commercially viable, high quality and efficient wash system.

The result not only provides a significant improvement in stock cleanliness and microbial loadings but also reduces processing costs.

Windsor Engineering was established in 1975 by Executive Bill Studd. Windsor is well known as the major supplier of specialist equipment to the timber processing industry.

The company has a vigorous engineering and development team and has built a strong reputation for innovative, high quality equipment and reliable after sales service.

This venture demonstrates Windsor's ability to apply its innovative approach to problem solving in a totally new field.