

# FLEXIBLE FLAVOURING

## PARALLEL PROCESSING - Production Flexibility and Efficient Manufacture

Monexco International, a wholly owned subsidiary of Monde Nissin, the Philippines market leader for the supply of biscuits, noodles and snack foods, has recently awarded Matcon a substantial contract for the supply of a new seasonings plant.

The new plant, being built in Thailand with the backing of the Thai Board of Investment, is expected to be completed during 2006.

The plant is designed to receive various powdered raw materials, formulate the ingredients into a batch and mix in a high speed mixer. The mixed product is then taken to the finished packaging hall, for packing into sachets. These sachets are included in the Company's consumer-ready bowl of noodles - simply add water and mix in the seasoning contents of the sachet to flavour.



Due to the required flexibility of the plant and the need to change formulations regularly, the complete process is based on Matcon's Cone Valve system. Using Matcon's Vari-stroke technology, minor and major ingredients are formulated into an Intermediate Bulk Container (IBC). The Vari-stroke technology, which is an extension of Matcon's Cone Valve system, enables fast and accurate direct dosing of products from silos or IBCs, without the need for secondary feeders (secondary feeders would be slow and would not allow rapid change over between formulations without



Seasoning and Freeze Dryer Facility

extensive cleaning to prevent cross contamination between ingredients).

Ingredient quantities vary from a few grams, to over a hundred kilograms, with accuracies of 1%. The plant has been designed with a throughput rate of 7 batches per hour, each batch potentially being a different formulation to the previous batch.

In order to achieve the most cost effective and ergonomic factory layout Matcon was consulted at the building design stage. This approach, which involved the architect, the Company's production managers and Matcon's process design team meant that all disciplines necessary for the successful design and operation of the finished plant had an input to the overall design and to minimising the associated cost.

Matcon has single source responsibility for the supply of all the process equipment, with the exception of the mixers and the packers, which have been chosen and ordered separately by Monexco.

All equipment is designed and manufactured to the highest GMP standards to allow rapid and thorough clean down. The plant is designed to operate 24 hours per day and when complete, will be one of the most advanced and flexible seasonings manufacturing plants in the world.

In recent years, a number of manufacturers such as Monexco have turned to IBC batch production as an alternative to fixed conveying and formulation equipment. This method of production allows each discreet operation to run at maximum efficiency and ensures that down-time is kept to a minimum.



Contract awarded to Matcon

This technique is known as "Parallel Processing" and is the key to efficient manufacture.

Many of Matcon's customers are now realising the benefits of employing the company's Cone Valve IBC Technology with numerous projects designed, manufactured, supplied and project managed using Matcon's in-house engineering capability.

# COVER STORY

The technology offers resounding cost savings by increasing production efficiency while also meeting relevant health and safety regulations.

Matcon is today a global organisation, strategically placed around the world to meet the needs and demands of a wide range of industries including metal powders, pharmaceuticals, foodstuffs, toners, chemicals as well as plastics.

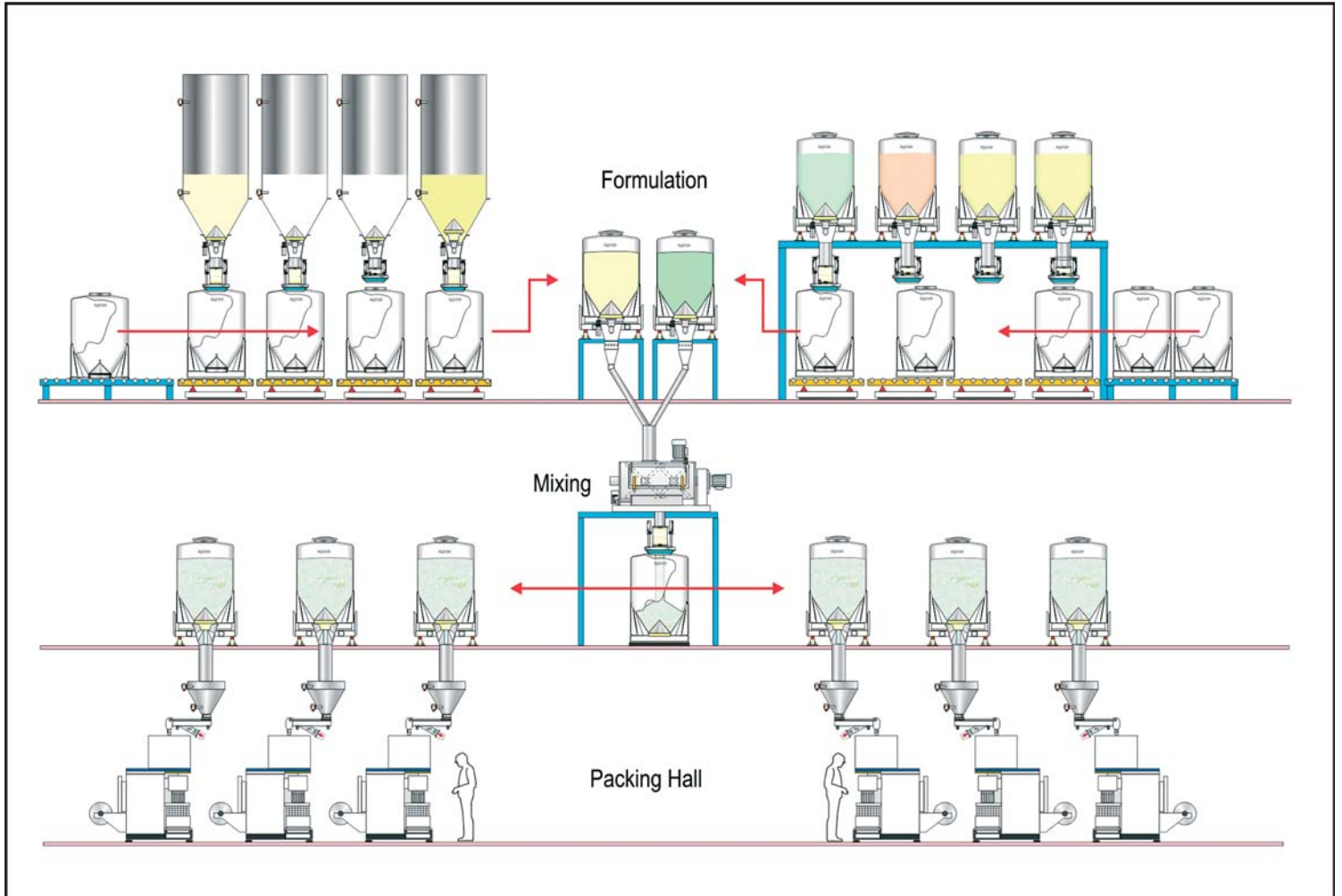
Matcon is also committed to reducing 'project risk' for customers by testing the 'actual' materials required in the process, before the main contract orders are placed. Matcon now operates Test Centres in the UK, Scandinavia, Australia, USA, Germany and Japan. These tests, which include IBC Filling and Discharging, flowability characteristics, Dosing, Blending, Containment and Clean-in-Place (CIP) have greatly reduced

the project risk for numerous customers, many of whom experienced solids handling problems with alternative technologies.

For further information, contact:

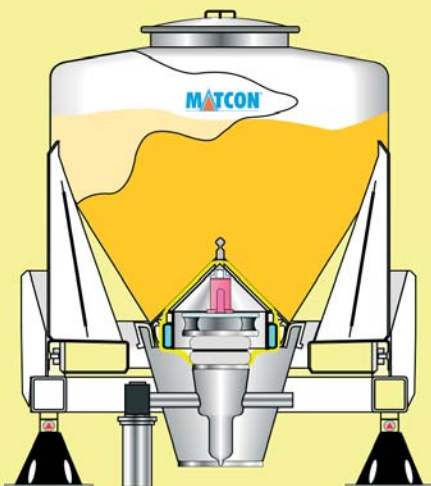


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Typical Formulation, Mixing and Packing

## Vari-Stroke Technology



Properly applied, the Matcon Cone Valve can overcome all the typical flow problems - bridging, blockages, segregation, flushing and core-flow. The pulsing action of the Cone Valve 'conditions' material as it flows by, so that it is easier to be handled by the following process.

The "VARI-STROKE" system develops this proven concept by allowing the Cone Valve pulse height to be continuously adjusted throughout the discharge process. This, when used with Matcon's advanced control software, provides fast, efficient and accurate dosing of even difficult to handle materials.

The Vari-Stroke is also the heart of Matcon's new "FLEXI-BATCH" technology, the next generation fully-automated formulation system. This revolutionary technology enables an infinite number of ingredients to be quickly and accurately formulated whilst taking into account the individual discharge characteristics of each material.

