



CASE STUDY

## INCREASING MANUFACTURING FLEXIBILITY with improved traceability & speed



"As a contract manufacturer utilizing a Matcon System, we have maximum flexibility in terms of batch size and number of product lines with minimum risk of cross contamination and clear traceability. In addition to this, we can easily expand the system at any time."

Robert Scholl, Operations Manager

THE POWDER HANDLING EXPERTS

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Discover how Matcon worked with contract manufacturer SternMaid to deliver a new manufacturing facility in the Asia Pacific region to develop and produce highly-customised food products, catering for its customers in the food and beverage industries.



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## About SternMaid

**SternMaid Asia Pacific  
are a large contract  
manufacturing service  
exclusively serving the  
food industry.**

SternMaid Asia Pacific is part of the Stern-Wywiol Gruppe, a leading supplier of food and feed ingredients whose headquarters are based in Hamburg, Germany.

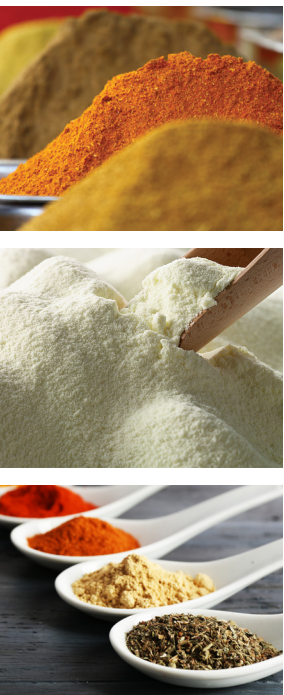
SternMaid Asia Pacific are a large contract manufacturing service exclusively serving the food industry, manufacturing food additives and nutritional supplements in batch sizes ranging from 50Kgs to 2,000Kgs. Powder-based products for the dairy and infant nutrition sector also form part of their product range so hygiene and quality must be paramount at all stages of the manufacturing process.

In line with their growth plans and investment in the Asia Pacific region, Stern needed to invest in a new manufacturing facility which would be the group's regional manufacturing hub. Its primary focus would be on developing and producing highly-customised food ingredient systems to improve both functional and nutritional properties of food products, catering for its customers in the food and beverage industries.

The manufacturing facility was planned to deliver a capacity of up to 5,000 tons per annum in its initial form, complementing and enhancing the current supply network via their facility in Germany and a network of distributors. Whilst their German manufacturing operation produces 40,000 tonnes per annum, SternMaid were foreseeing growing challenges to meet the increasing demand from the South East Asia region. This coupled with extended delivery times and increased shipping costs, has driven their need to set-up a manufacturing plant in South East Asia.

Occupying a site with an approximate gross floor area of 42,000 sq. ft., the manufacturing facility was officially opened on 10th September 2018. As a key manufacturing hub, the facility will complement the group's production plants in Suzhou, China and Mumbai, India, while contributing significantly to the overall manufacturing output and distribution networks of the group in the region.





### The need

Within food production processing, there is a growing demand for quality management certifications as well as traceability and quantitative QC analysis. This requires, amongst other things, highly variable batch sizes and effective measures to counter cross-contamination. Certain countries also stipulate that food is manufactured in a particular way to meet dietary requirements such as Halal, a significant factor for the ASEAN consumer market.

Clients of contract manufacturers are also requesting contingency plans are prepared so that should there be an interruption in supply from one facility, orders can be easily substituted with supply from an alternative site. Stern-Wywiol Gruppe are attaching great importance to being able to offer a uniform product and process quality standards irrespective of which facility in their global network manufactures a product. It is therefore essential that each product delivered by SternMaid is manufactured in a similar way to maintain product integrity.

The new plant needed to be able to manufacture an extensive range of formulations therefore flexibility and the ability to quickly changeover recipes was a key requirement, whilst maintaining the high standard in product quality.

The plant in Malaysia will produce complex and demanding blends of ingredients, sometimes used at extremely low dosages, such as micronutrients premixes or blends of texturizers such as hydrocolloids and emulsifiers for the dairy and meat industry.

## Why did they call Matcon?

SternMaid Asia Pacific previously worked together with Matcon when they established their new manufacturing plant in Suzhou, China in 2011.

A local presence is of utmost importance to SternMaid Asia Pacific and with Matcon having Sales and Technical Service teams based in China, Malaysia and Australia, support and onsite assistance is near should the need ever arise.

Matcon understand the significance of adopting a lean manufacturing principle and are experts in the supply of container blending technology. Therefore, we were a perfect fit with our business model, enhancing our product offering of customized complex ingredient solutions.

IBC Blending, with the ability of High Shear mixing, was a significant benefit to SternMaid as some of the powders in their portfolio of products tend to become sticky and therefore require more work to blend homogeneously. The Matcon Cone Valve technology in our IBC System promotes and controls the flow of powders from the IBC, removing any risk of segregation.

## What equipment did we install?

The Matcon IBC system was selected as SternMaid had a requirement to manufacture a range of batch sizes and a large range of recipe formulations so a high level of plant flexibility was required. Each batch could be a different recipe to the risk of cross contamination needed to be kept to a minimum. The IBC Blender meets these requirements as it can accommodate

a range of IBC sizes and there is no cleaning of the Blender itself, the IBC's are cleaned off line in an IBC Washing system.

- 2 x IBC Filling Systems
- 1 x Mixer Filling System
- 1 x Mixer Discharge System
- 1 x 1000L-3300L IBC Blending System with High Shear
- 1 x IBC 'Powder Packer' Packing System
- 1 x IBC 'Auger Filler' Packing System
- 2 x IBC Washing Systems
- Several 1000L IBCs
- Several 2500L IBCs



## The results

The new decoupled, contained system enables SternMaid to process powders in a dust-free environment, creating safe working conditions for their operators and reducing the risk of product cross contamination. The Intermediate Bulk Containers also provide contained materials transfer with dust-free blending (as the IBC is used as the blending vessel). The product always remains contained in the IBC before being moved directly to packing.

IBCs are taken offline for cleaning with a wash lid which incorporates a lance which provides 360-degree washing coverage to clean the internal surfaces of the IBC.

Matcon's equipment is designed with ease of use in mind to increase OEE and production efficiency therefore all product contact 'change out' parts can be removed for cleaning without the use of tools, reducing downtime to the bare minimum.

The transparent plant layout allows SternMaid to demonstrate manufacturing efficiency and cleanliness. This has increased their ability to deliver new business contracts and achieve further accreditations such as Halal and FSSC 22000 certification, as well as Stern-Wywiol Gruppe in-house audits.

Since commissioning of the new factory and progression into full production, SternMaid also believe that the facility will assist with their plans to develop into the Dairy industry due to the hygienic, closed design of the system.

### A WELL DELIVERED PROJECT

Communication with Matcon's Engineering and Project teams was smooth and professional throughout the duration of the project. They were very responsive, and we felt in safe hands. Delivery and installation were achieved on schedule and the systems performance has met our requirements so far.





*"This new site in Malaysia will allow us to quickly process and deliver orders to our customers in the Asia-Pacific region, with optimized supply chains and all required QM certifications. All that without any concessions regarding quality viz our European sites, but to the same exacting standards. Our clients and channel partners are happy with the design and appointment of the plant, with the IBC blending system taking centre stage and receiving great care and maintenance due to our successful partnership with Matcon."*

**Hendrik Moegenburg**  
**Managing Director**



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# MATCON<sup>®</sup>

POWDERS, HANDLED

## WHY CHOOSE MATCON

We understand the challenges faced by manufacturers of powder based products.

## YOUR CHALLENGES

Recipes often contain powders with very different bulk densities & particle sizes, causing segregation of the mix on transfer.

Some powder mixes can become cohesive & poor flowing, which slow the line whilst blockages are cleared.

Dusty environments create cross-contamination risks and pose health risks to staff.

## HOW WE CAN HELP

A system designed to optimise production flow is what we do. All process steps occur simultaneously for maximum efficiency.

The Cone Valve in each IBC handles all powder types & protects the blend during transfer, for great product quality every time.

A closed system design gives full dust containment for a cleaner environment and operator safety.