



CASE STUDY

CREATING A POWDER HANDLING SYSTEM to improve flexibility, efficiency and production capacity

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TRUEPROTEIN.COM.AU

"At True Protein, we create the best tasting protein powders, health and performance foods, and to achieve this, we go to great lengths to select the very best ingredients from around the globe. It goes without saying that we apply the same principles when sourcing machinery for our state-of-the-art manufacturing facility.

We believe Matcon is the world's best blending system."

Ben Kierath, Managing Director

THE POWDER HANDLING EXPERTS

www.matconibc.com

Discover how a leading Australian manufacturer of Sports Nutrition products implemented a system that enabled not only scalable growth potential, but one which also has the flexibility to handle an increasing range of ingredients.



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About True Protein

Established in 2014,
True Protein has become
Australia's fastest
growing natural
Sports Nutrition company

Based in Sydney, Australia, True Protein is a family-owned business who manufacture a wide range of all-natural Sports Nutrition products including protein powder blends and pre- and post-workout supplements. Established in 2014, True Protein has become Australia's fastest growing natural Sports Nutrition company, producing over 300 products and 12 protein flavours made from the finest globally sourced ingredients.

Besides Australia, True Protein also distributes to New Zealand, Singapore, Hong Kong, Canada and the United States of America. Their customers include a mix of high-profile athletes, sports teams, health conscious fitness enthusiasts and gyms.

Specialising in producing 100% natural products which have essential amino acids to assist muscle growth and healthy antioxidants, True Protein products contain no added sugar, artificial flavours or preservatives.





Their Need

Their original process consisted of two lines:

Line one comprised a small vertical mixer which was emptied by the operator into small drums. These drums were manually fed into a hopper which supplied a small screw conveyor filling a 250g pouch auger packing machine.

The second line consisted of a larger version of the 1st line. However, on this line there was a 600L vertical mixer hopper feeding an inclined bucket elevator which in turn fed a 1kg bag filler running at 6-8 bags per minute.

This production set-up was heavily labour intensive and inefficient with numerous manual handling process steps. Product recipe changeover was slow due to the amount of equipment cleaning needed when switching recipes and floor space was also tight, limiting True Protein to smaller volume, campaign style production.

To meet an escalating order demand and growth ambitions, True Protein purchased a larger building next door to their existing premises to cater for their expected 50% growth in production capacity and sought a new production setup that could support their requirements.



The Right Solution

From the outset of project discussions, True Protein liked the simplicity and flexibility that the Matcon IBC system offered. They could see the opportunity to improve efficiency and production capacity, whilst significantly reducing the amount of manual handling steps. Future product formulations would also be easily introduced into the manufacturing process.

Managing Director of True Protein, Ben Kierath had previous experience of a Matcon system at a major company in Europe and recognised that by installing a new Matcon IBC system, the company would be able to benefit from:

- Handling multiple flavours and batch sizes in one shift due to the quick changeover now possible during blending
- Reducing their cleaning time as IBCs can be washed 'offline' before being put back into production
- Enhancing product integrity as previously hard to handle powders such as whey powder could now be discharged without risk of segregation using the Matcon Cone Valve.

The Matcon team worked closely with the team at True Protein to determine the most process efficient layout tailored to their needs and Matcon provided 3D model drawings to support this. The existing building structure was put to good use - the mezzanine floor was utilised for the sack tipping of raw materials into the IBC's and the side wall was used for raw material storage.

Together a system was developed and designed to increase flexibility and efficiency of production, whilst also addressing the following key areas for improvement:

- Reduce manual handling
- Reduce down-times with off-line cleaning
- Rapid recipe changeovers
- Implement a system that enabled scalable growth potential and flexibility to handle a wider range of ingredients

The new Matcon system included the following process equipment:

- A raw ingredient IBC Filling System that loads the batch ingredients into an IBC. These ingredients include Whey Powders, various flavours and minor ingredients.
- Multi-sized IBC Blender accommodating IBCs from 1000L to 1500L
- Batch feed system discharging to a Pouch Packing Machine
- IBC Wet Wash System
- 1000L and 1500L Stainless Steel IBCs

*"We believe Matcon
is the world's best
blending system."*

**Ben Kierath,
Managing Director**

The Benefits of a Matcon System

Improved Product Security

IBCs are formulated off-line ready for Blending. The 3-in-1 Sack Tip Unit provides a closed transfer of material from sack to IBC with all ingredients being sieved and passed over a permanent magnet during the filling operation giving Quality Assurance. A dust collection system provides ensures that powders are processed in a dust-free environment, creating safe working conditions for operators and reducing the risk of product cross contamination.

Faster Recipe Changeover and Blending Times

Product changeovers are now much quicker than with their vertical mixers. With blending taking place within the IBC itself, there is no need to clean the Blender between recipe changes as there is no risk of cross-contamination, even when using Allergens. The product always remains contained in the IBC before being moved directly to packing. This offers the ability to 'mix any recipe, any time' and has given True Protein the full flexibility they need to fulfil orders on demand.

The ability to quickly load and unload the IBC Blender when compared to a vertical mixer will also reduce considerably the amount of non-value-added time or waste.

By using IBCs, cleaning critical equipment and product contact parts is done 'off-line'. This IBC blending approach significantly minimises critical equipment down time, improving the productivity and process efficiency and gives True Protein the flexibility to develop and handle a wider product range.

Packing Efficiency

By delivering IBCs (used for blending the powders) directly to a discharge position above the packing line, there is a total elimination of double and triple handling during the transition from blending to packing.

The Matcon Discharge Station is capable of interfacing with any number of packing systems on the market and provides an automatic, controlled flow of product directly to the packing line, without the need for secondary feeding equipment to regulate the flow. This means that recipe changeover can be done with the minimum amount of down-time as cleaning is quick and easy.

The unique Cone Valve within each of the Matcon IBCs ensures that product is discharged without any risk of segregation.

With the refilling of the infeed hopper being reliable and steady, the accuracy and speed of the packing machine is optimised whilst achieving a quality product in the final pack and reducing the risk of waste.



The Results

Speaking to Ben Kierath, Managing Director of True Protein, he highlights the following key accomplishments since implementing a Matcon solution.

Process Efficiency and Cleaning

“Since going live with the Matcon IBC Blending System, True Protein’s manufacturing capabilities have become more streamlined and efficient. The Matcon system enables trusted cleaning procedures that gives us absolute confidence when it comes to changing from one formula to the next. Ensuring we eliminate any chances of allergen cross contamination is essential to our business.”

Safer workplace

“Creating a safe working environment is our number one priority at True Protein and installing a Matcon IBC Blending System has really contributed towards creating a safer workplace.”

Rewards to the business

“The Matcon IBC Blending System allows us to blend much larger batches than our previous system, providing significantly increased efficiency due to reduced batch preparation, cleaning and blending times.”



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MATCON®

POWDERS, HANDLED

WHY CHOOSE MATCON

We understand the challenges faced by manufacturers of sports nutrition products.

YOUR CHALLENGES

Expanding portfolios result in many changeovers which significantly impacts on available production time.

Whey powder is notoriously difficult to handle being sticky and poor flowing. New plant proteins are likely to be even more so.

Increasingly, recipes contain Allergens which means even more time spent in thorough clean-downs.

HOW WE CAN HELP

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

The unique Cone Valve in each IBC protects the blend & provides assured discharge, even on sticky mixes.

In-bin blending reduces downtimes for changeovers, and removes risk of cross-contamination for sports nutrition manufacturers.