CUSTOMER CASES from all over the world

BINZHOU GAOSHENG marks a milestone in China

Plukon about THE STORK ATLAS SYSTEM

THINK FAST
LineLink transfer systems: worry-free performance at 15,000 bph
First and foremost, “Think Fast” is about high speed processing, where once again we have exceeded expectations by being the manufacturer to raise the bar to processing throughputs of 15,000 bph (250 bpm). Given the quick growth in global population, which is increasingly urbanized, the supply of sustainable, healthy and safe sources of high-protein food will be one of the defining challenges in the decades to come. That is why poultry processing is moving to ever higher volumes and why a new milestone has been reached.

SUIT THE SPEED
Many of our current systems are already fully in line with the "Think Fast" approach. Our Stork ATLAS live bird handling system, combined with CAS SmoothFlow anesthetization, is perfectly able to handle capacities of 15,000 bph. Existing scalding, plucking, evisceration and chilling equipment can all be brought up to speed. Specifically designed for 15,000 bph capacities, we are proud to introduce LineLink, a new generation of transfer modules for top worry-free performance at top line speeds.

CARCASS BALANCE
Thinking fast is not just about running lines at the highest possible speed. Chicken processors at every level are also being motivated to "Think Fast" by a quickly changing market with its demands to make better use of raw materials and achieve a more sustainable carcass balance. Our customers require systems that enable them to use every part of the broiler and obtain a better price for an upgraded product. They have the option of adding our fully automated inline Thigh Fillet System and Drumstick Deboning System to their cut-up line.

FAST DECISION-MAKING
It is now almost impossible for poultry processors to think fast without being able to continuously monitor the production process. Innova Food Processing Software is a platform which enables fast thinking and easy decision-making. This intelligent software is not only available for high-tech plants processing 15,000 bph. Any processing facility can benefit using the new Recipe Manager module.

ACT AGILE
With their strict requirements and challenging demands supermarkets and restaurants are forcing our customers to "Think Fast" and act agile. We feel that it is our responsibility to equip processors with the right agile solutions to face these challenges. This is why we are continuously improving them. Examples are the new RoboBatcher grippers for fillet and leg products, the automated Nugget Line and the new Revo coating line for production of convenience food.

I wish you a good read and look forward to meeting you personally at one of our events, in particular at VIV 2018!

ANTON DE WEERD,
MANAGING DIRECTOR
MAREL POULTRY

The poultry industry is constantly looking for ways to stay cost efficient by reducing production cost per bird without compromising animal wellbeing, product quality and food safety. This is driving the trend to “Think Fast”. Marel Poultry fully supports poultry processors to meet this daily challenge in their part of the chain.
New grippers for fillets, legs and drumsticks

ROBOBATCHER GETS A FIRM GRIP ON STYLING

For many years now the RoboBatcher Flex has been successfully batching finished product. Styling batched products in the tray is the new challenge we face. Three new gripper designs allow fillets, legs and drumsticks to be placed into trays according to patterns chosen by the user.

The new grippers save labor and have been designed for easy use. They are easy to clean and changing them is a quick job with no tools necessary. All grippers connect to the base in the same way and have a quick change adaptor. Changing grippers to handle a different product can be done simply by hand in less than a minute.

TRAY STYLING

With supermarkets’ insistence on attractive presentations, tray styling is a hot topic among poultry processors. The new grippers are the perfect answer for fillets, drumsticks and whole legs. Soren Raahauge, Marel Product Manager Robotic explains, “Improvements in styling performance also save labor, as there is much less need for trimming or restyling afterwards. This is a welcome benefit as finding qualified staff is becoming a bigger challenge for poultry processors everywhere.”

DON’T DROP

The RoboBatcher’s vision system detects the orientation of every product on the belt, passing this information to the gripper. This allows for it to adjust its angle, always picking up the product in the same way. The new grippers do not ‘drop’ products into the tray, as bounce would cause a loss of control over how products land. Instead, the gripper moves to the bottom of the tray to release product at exactly the right spot. The jaws of the gripper open no more than necessary, which is particularly important for the last product in a tray.

Soren Raahauge concludes, “We will continue to focus on improving the performance of our grippers. By making increasing use of robotics, new grippers will be able to handle even more poultry parts.”

Fillet gripper

In tray packing situations, the tail (end) of a breast fillet may protrude over the edge, making sealing impossible. The new RoboBatcher fillet gripper has a tail bending device, which pushes tails down when picking up fillet. The gripper then descends into the tray. Its jaws open and shut without any pressure, tensioning of the belt between them positions the fillet. Grease on the tray and protruding tails no longer compromise sealing performance, which results in unequalled automatic styling.

Drumstick gripper

The drumstick gripper has the same base but a totally different jaw design with no belt in between. Its slim jaws grab drumsticks by the bone, so that the thicker end protrudes, making it easy to arrange drumsticks side by side in the tray. Should a customer want to tray drumsticks in a particular pattern, this is selected on RoboBatcher’s interface. Following the pattern, RoboBatcher always places drumsticks into trays in the same order. The gripper goes deep into the tray, opening its jaws gently and releasing product for the best possible styling.

Whole leg gripper

The latest whole leg gripper, looking somewhat like an upturned basket, picks up an average of 60 legs per minute. When a leg is detected on the belt, the jaws and push-out system position themselves over it. As the gripper moves upwards, the jaws close. The gripper is 500g lighter than its predecessor and can be moved around more quickly.

Trays in place

A new tray guide system keeps trays firmly in place regardless of size and height. As grippers go really deep into the tray, it is important that they do not take trays with them when they retract. With the new top guide, fully adjustable for height, this cannot happen.

Optimum cleaning

RoboBatcher now features belt lifters, allowing spray nozzles to reach all parts of the belt’s underside. This means they no longer have to be removed for cleaning. The vision system is also easier to clean as it has been integrated into the RoboBatcher, which has fewer steel feet.

GO TO: marel.com/RoboBatcher

VIV EUROPE HIGHLIGHT!

3D printed lightweight parts

Designing the three new jaws called for some advanced engineering. 3D printing gave engineers design flexibility and allowed them to keep weight as low as possible, which is important for capacity. RoboBatcher moves quickly with acceleration forces of up to 1G. A heavy gripper could potentially slow performance and risk damage. The new grippers feature many 3D printed plastic parts with fewer bolted joints needed. They are also much easier to clean.
Binzhou is a rapidly developing city 100 km (62 miles) from China's east coast, located in the Shandong province, the nerve center of the country's poultry industry. The Xinsheng Group is a loyal customer of Marel Poultry. In 2010 the company had already ordered two 12,000 bph (200 bpm) Nuova evisceration lines for its plant in Boxing, a town 20 km (12 miles) from Binzhou. This plant will continue production and will be joined by the new greenfield factory, which features a considerably higher level of automation.

DEFEATHERING AND EVISCERATION

Binzhou Gaosheng's poultry processing automation starts in the defeathering department, where Stork scalders and pluckers do an excellent job in delivering products which live up to Chinese expectations regarding skin and color. Scalding is fine-tuned for the best combination of epidermis presentation and white skin.

Binzhou Gaosheng operates two complete Stork Eviscerating lines with a combined capacity of 27,000 bph (450 bpm). They include Stork Opening Machines, Vent Cutters, Nuova eviscerators, Neck Skin Inspection Machines and Inside/Outside Washers and Final Inspection Machines. A fully automated evisceration process is a huge step forward in hygiene and consistent quality and results in a top quality product with lowest risk of cross-contamination.

GIBLET PROCESSING

Giblet products are very popular in China. Therefore Binzhou Gaosheng has installed a large number of automatic giblet harvesting solutions. After removal in the Nuova eviscerator, viscera packs are automatically re-hung to a separate processing line. They hang hygienically down from the viscera shackle and are ideally positioned for the automatic giblet harvesting operations which follow. Edible giblets are harvested by the HLH heart lung harvester, PLH automated liver harvester and the PI harvester which keeps the gall bladder intact. Stork Nuova offers the most effective way of harvesting giblets to give optimum yield, quality and hygiene.

MAINTAINING CAPACITY

Mr. Han Baihuai, General Manager of Binzhou Gaosheng and Executive Director of the Xinsheng Group says, “We don’t sell whole chicken, as the market simply doesn’t ask for them. That’s why we send all chilled products to the cut-up lines. We’re talking about a large number of products, so we can’t do this without our reliable automatic equipment from Marel Poultry.”

To enable 100% cut-up at 27,000 bph (450 bpm), the Binzhou Gaosheng plant has two grading lines, four ACM-NT cut-up systems, and seven AMF filleting lines. In each grading line, an auto-calibrating SmartWeigher is used for monitoring processed weights and deciding which products are distributed to the “lightweight” cut-up line and which to the “heavy weight” ACM-NT line.

HIGH STANDARDS

Each of the four ACM-NT lines cuts a wide range of products. Amongst them are wing segments, anatomic legs, necks, leaf fat, spines and tails. The wing segments include the middle joint of the wing cut in the dedicated Second Joint Wing Cutter.

Breast caps go to an AMF system where fillets, tenderloins, cartilage meat and residual breast meat are harvested.

“With the support of Marel Poultry, Binzhou Gaosheng has succeeded in drastically expanding its plant and production facilities, marking an important milestone in industrial poultry processing in China. For Marel Poultry it was the largest project in its history in China. The Binzhou Gaosheng greenfield plant features two processing lines, each with a capacity of 13,500 bph (225 bpm).

Binzhou Gaosheng supplies its products to local markets and Chinese fast food companies. Its expansion project marks a crucial milestone in the development of industrialized poultry processing in China, as it is one of the first Chinese companies to automate the cut-up and deboning departments on this scale and at this capacity. It is expected that many other companies in the strategic region of Shandong will soon follow Binzhou’s example.”

From defeathering to cut-up at 27,000 bph capacity

BINZHUO GAOSHENG marks a milestone in China
Drumstick Deboning System – inline automation at high speed

High time to debone drumsticks

Deboned poultry leg meat is infinitely versatile, both as fresh meat and as a base material for ready-made products. In addition, demand from the poultry processing industry for deboned leg meat is still growing rapidly. That is why Marel Poultry has launched its inline Drumstick Deboning System. With this and the Thigh Fillet System, it is now possible to debone the entire leg automatically and harvest inline all leg meat at high speeds. Human intervention is virtually no longer needed.

The market for whole bone-in legs is stable and unlikely to grow. Deboned leg meat, however, is fast gaining ground in markets around the world, where consumers like its succulent, juicy and meaty flavor.

A GOOD ALTERNATIVE
The popularity of thigh fillets means an equal number of bone-in drumsticks, which now have to be sold. Outside of the barbecue season this can be an issue. It is therefore perfectly logical to start deboning them. Marel Poultry can now offer the perfect solution to upgrade them into delicious fresh drumstick fillet products.

TASTY BASE
The drumstick fillet is the perfect meat for kebab, barbecue skewers, whole muscle nuggets and products such as Mediterranean stuffed fillets. The meat that is cut off the bone provides a larger surface area to marinade and also lays flatter on the grill, which helps the dark meat cook evenly. Most deboned drumstick meat will, however, be used in high-quality further processed food, such as nuggets, burgers, patties and schnitzels. As a tasty base material for ready-made products, deboned drumstick meat adds more value than its bone-in form.

LABOR SAVING AND FLEXIBLE
Marel Poultry has a developed dedicated drumstick deboning system for its ACM-NT system, where virtually no human intervention is needed. This labor saving aspect is crucial in processing facilities today, as skilled employees are in scarce supply worldwide.

An automated solution gives plant management much more flexibility than having to plan for staff to do the job manually. Debone or not, all that is needed is to simply press a button.

GO TO: marel.com/DDS

Carcass balance
Better utilization of raw materials becomes increasingly important as world population grows and the demand for protein increases. It is likely that leg meat products will account for a large share of the projected increase in global chicken consumption. Marel Poultry’s answer lies in an optimized carcass balance, as we supply systems that enable our customers to use all parts of the broiler – also the previously less popular parts – and obtain better prices for them. It simply doesn’t make sense to use just the breast meat and ignore the rest.

Achieving maximum carcass balance by making full use of every part of the chicken is a significant contributor to efforts to improve sustainability.

The Drumstick Deboning System (as well as the Thigh Fillet System) plays an important role in carcass balance, as it is a means of upgrading “dark meat”, using other parts of the chicken rather than just the breast fillet.
Industrial poultry processing has gained a firm foothold in Sri Lanka over the past few years. Recent investments by important companies such as New Anthoney’s, Weehena and Nelna show that automation is very much on the rise. Marel Poultry is playing a crucial role in this development, helping entrepreneurs find processing solutions which best fit their situation.

Water treatment

In Sri Lanka, poultry processors are highly aware of the need to re-use waste water. With environmental requirements in one hand and the scarcity of clean water in the other, waste water treatment is becoming ever more important. Being able to treat waste water so that it can be re-used rather than simply discharging it, is one way of promoting environmental sustainability. Marel Water Treatment is able to supply the right tailor-made solutions to Sri Lankan customers, at the same time reducing the water footprint of food processing.

New Anthoney’s is ready for the future

New Anthoney’s Group, based in Hanwella, is one of Sri Lanka’s leading poultry producers and a long-term loyal customer of Marel Poultry. New Anthoney’s has embarked on a major expansion program of its entire vertically integrated operation. The processing plant grew from 2,000 to 5,000 bph (33 to 83 bpm) to respond to growing customer demand, amongst whom are some major fast food chains. The expansion included a new Stork high-frequency water bath stunner and automation of the evisceration department with equipment such as the Stork VDC vent opener/cutter and the Nuova eviscerator. Emil Stanley, a veteran in poultry farming and broiler chicken production is New Anthoney’s managing director. He says, “Our ultra-modern Marel Poultry systems ensure that the health conscious Sri Lankan consumer gets nothing less than the best. Our company has come a long way incorporating state-of-the-art technology with the highest expertise to supply quality meat products to the Sri Lankan market. Our strategic expansion, in close cooperation with Bodum, has enabled us to accommodate modern advances in poultry processing technology while adhering to internationally accepted environmental standards.”

GO TO: www.newanthoneys.lk

Emil Stanley, managing director New Anthoney’s

Weehena continues growth

Weehena Farms in Mahawewa is one of the longest standing customers of Marel Poultry in Sri Lanka. Initially, Weehena started industrial processing at 2,000 bph (33 bpm). Now the company is ready to expand to 4,000 bph (66 bpm). The entire plant is equipped with Marel Poultry solutions and has seen a recent expansion in the defeathering line, which involved adding Stork scalers and pluckers to the existing line. Both gizzard processing and evisceration have recently been automated. To this effect, the Stork Nuova CoreTech has been installed. “Being a premier customer of Marel, we are pleased to continue our company’s growth with Marel Poultry and their agent Bodum Engineering,” says Mr N.S. Victor, Managing Director Weehena Farms.

Frank Miranda from Bodum adds, “Weehena is a leading poultry company in the country gradually growing to a sizable integrator. We have confidence that we will be able to expand further and our installed equipment will be ready to grow along with them. Nuova CoreTech in particular gives plenty of opportunities to do more. More units can be added to the carousel, as well as a separate viscera pack line and, in due course, automatic giblet harvesting.”

Strong growth of New Anthoney’s, Weehena and Nelna

Automation boosts in Sri Lanka

Frank Miranda, Managing Director of Bodum Engineering Solutions, Marel Poultry’s Sri Lankan agent for the last 20 years, says, “Our tailor-made solutions, suitable for all capacities, help processors get started with an initial capacity, which can then grow to higher capacities or more automation later on. This can be done without having to replace equipment, it is often easy to upgrade simply by adding modules. In this way, we can create customized solutions for every processor in Sri Lanka.”

Frank Miranda continues about Bodum’s longstanding relationship with Marel Poultry, “It offers us the added advantage to this particular industry. Marel Poultry’s scope of supply enables us to provide a total processing solution. Moving forward with Marel Poultry, Bodum Engineering will continue to remain the industry leader in these solutions.”

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Plukon on the Stork ATLAS live bird handling system:

“ANIMAL WELFARE CLEARLY BENEFITS”

Dutch poultry processor Plukon Food Group is the world’s first company to install a Stork ATLAS live bird handling system at its Maasmechelen facility in Belgium. Plukon is so satisfied with ATLAS, that the company has ordered a second system, which will soon be installed at the plant in Goor, the Netherlands. Michiel Klooster, Director Operations at Plukon Food Group, tells about his experiences with ATLAS.

What were your expectations for the ATLAS system?
“Prior to the installation, at Plukon we had high expectations of the ATLAS system. That is why we decided to join Marel Poultry in further developing this system. We were excited to know if the system could solve all issues and maintain the same good properties we knew from other systems.”

Plukon was the very first company to install the ATLAS system. Has ATLAS met all expectations?
“Of course, we identified some issues that could be improved over time, which is only logical with an all-new system. In the end, all of this has resulted in a magnificent, functional system with maximum attention to animal welfare, efficiency and tray hygiene.”

Plukon has been using the ATLAS system for some time now. What is the most striking long-term effect?
“Animal welfare before slaughtering clearly benefits. During catching and stunning, the system obviously has many animal welfare assets. An additional benefit is that trucks are loaded more efficiently too.”

How have farmers and transporters reacted to the system?
“Catching teams and transporters are also very positive about ATLAS. The large loading opening of the SmartStack has made catching much easier. The floors slide smoothly and the whole system is very robust.”

What are your main improvements?
“We definitely need fewer truck movements and we have seen that birds are less stressed. Broilers stay in the tray through the CAS stunning system right up to shackling. They therefore avoid the major stress factors which other systems subject them to. This absence of stress also benefits product quality.”

GO TO:
www.plukonfoodgroup.com

Plukon’s Animal Welfare before Slaughtering

Animal wellbeing was a key factor when developing the ATLAS system. Once in the SmartStack modules, broilers have plenty of headroom, in fact the most in the industry. During transport, birds in distress can easily be taken out of the tray through removable side panels.

Birds stay in the transport tray until they are shackled to the processing line for electrical stunning or pass through a fully integrated CAS SmoothFlow system. Any birds dead on arrival can be removed at the start of the process, allowing food safety and religious requirements to be met.

EFFICIENCY
Besides animal wellbeing, there are also efficiency benefits that can be seen from ATLAS.

On the farm, the SmartStack module shows off the many advantages of its ergonomic design. The wide access for loading significantly reduces the risk of damage and stress to the bird. Combined with the smart floors which slide easily and close off each full tier, the SmartStack construction allows for considerably faster loading with fewer personnel.

Thanks to the ingenious bottom layer which doubles as a pallet, a SmartStack module can contain 38% more broilers than existing systems. This means lower truck transport costs and CO2 footprint. Its agile construction is a big asset too. As floors (unlike drawers) never protrude beyond the footprint of the module itself, modules can be placed anywhere in the growing shed, even in corners or close to walls.

On the farm and on the truck, SmartStack forms a multi-tier frameless unit. In the plant, the destacking system breaks it down into individual trays, ready for processing.

GO TO:
marel.com/ATLAS

What are all these benefits of ATLAS?
Existing Stork processing systems such as ATLAS live bird handling, CAS SmoothFlow, Nuova evisceration and giblet harvesting, IRIS vision grading and SmartWeigher are already capable of handling 15,000 broilers per hour (250 bpm). All that remained was the development of automatic transfer systems to link these individual processes at this higher capacity. Marel Poultry is now proud to announce LineLink as a key pillar in the 15,000 process.

The all-new LineLink systems automatically transfer both product and data from the kill to the evisceration line (LineLink DE) and from the evisceration to the air chill line (LineLink EC) at hourly throughputs up to 15,000 broilers per hour (250 bpm).

**DO NO HARM**
This central provision of the Hippocratic oath applies not just to medical doctors but to automatic transfer systems too. Automatic transfer is by definition a process which cannot add value. Done poorly (dropped product, product hung by one leg and broken legs), it will have a negative impact on product quality and overall operating efficiency. Automatic transfer systems should do their job so supremely well and so reliably that they should be inconspicuous, only attracting attention by the lack of problems and unwelcome costs they don’t bring.

LineLink transfers have been designed with this philosophy in mind.

**ONE TO ONE TRANSFER**
Both LineLink DE and LineLink EC use a track-driven carrousel that is mounted in the well-known, easy to clean and easy to set Stork Reference Series frame. Carrousels hard couple the lines they join. Both these lines run at exactly the same number of shackles per minute, so that products are transferred on a one to one basis with no empty shackles being created downstream. At the transfer point, each product is always exactly opposite the shackle to which it is being transferred. This ensures that products are transferred correctly by both legs and are properly positioned for the next stage in the process.

**PERFECT SYNCHRONIZATION**
Perfect synchronization is achieved by a combination of mechanical and electronic techniques. The system’s transfer timing is set mechanically and remains the same. Line speeds are synchronized electronically by the proven Stork ATC system. Active Tension Control uses dynamometers installed in front of and behind the transfer.

New Stork vent cutter - precise performance

**PROVEN HYGIENIC**

The Stork VC-20 RS vent cutter makes use of the proven technologies of the well-known Stork evisceration Reference Series. It is designed for the highest capacities and is perfectly fit for 15,000 bph (250 bpm) line speeds. The VC-20 RS will handle the heaviest weights and wider in-flock weight variations.

To make this possible, the infeed and outfeed of the VC-20 were given more time to position and process the products. Intelligent use of technological knowhow keeps processing movements smooth, despite the high speed.

**PRECISE POSITIONING**
Installed in the evisceration line as the first module, the VC-20 RS vent cutter works hand in hand with the subsequent Stork Opening Machine, both featuring 20 processing units. Products are guided...
Performance

A key role for LineLink transfer systems in a 15,000 bph process

New Stork vent cutter - precise performance

Proven hygienic solution

and carrying out the vent cutting process. Plenty of time for positioning, fine-tuning contact with products for longer giving the machine's units are therefore in the machine's cam diameter is used. Leave the Vent Cutter mean that more of leave the points where products enter and different shapes and sizes of product. Stork Vent Cutters can be fine-tuned for accurately and hygienically. Ensuring that vents are cut consistently carefully into the Vent Cutter and positioned precisely, which is crucial for ensuring that vents are cut consistently accurately and hygienically.

More time and space result in an optimal vent cutting job on heavier bird weights and on flocks with wider weight spreads. Stork Vent Cutters are the perfect tool for variable product input material all while performing at the highest speeds.

Maximizing hygiene

Vents are now efficiently cleaned, clamped, cut and drawn out of the carcass, including bursa fabricii and urethra. Because of improved product positioning, back, kidneys and tail remain undamaged, thereby maximizing yield. Next, the vent is deposited over the back of the product, separated by a plate to block touching. This technique prevents contamination, thereby optimizing hygiene.

Reference series

The VC-20 RS is a Reference Series machine. RS machines have self-supporting frames into which water and compressed air supply pipes have been integrated, provided with standardized connections. RS machines have been designed to be easy to maintain and clean.

Go to: marel.com/VentCutter

Solution for highest capacities

Big broilers at 8 inch

As products are tending to become heavier in the today's poultry business, the distance between the units has been increased in the 8" version of this vent cutter, the VC-15 RS, with 15 units. Now even the biggest broilers in the market can be processed.
“For me, Marel Poultry is the most innovative company in the industry.”

Old Married Couple

Mr Bárány continues, “We knew that we had to grow to remain competitive in a challenging environment, where customers are becoming ever more demanding and labor to operate our processes ever more scarce. It was obvious that only investment in the latest technology would give us the growth we were looking for. We chose Marel Poultry because, like an old married couple, we really know and trust one another. For me, Marel Poultry is the most innovative company in the industry.

The first stage of the project saw the upgrading of the primary process, commissioned in 2017. Master Good was already a user of Marel Poultry scalding, plucking and evisceration technology. Additional immersion scalding and plucking equipment was bought to handle the increased throughput. The company’s existing Nuova evisceration and giblet harvesting system can cope easily with the new situation.

From Worst To Best

Master Good’s main investment in the primary process was the purchase of GP live bird handling and CAS SmoothFlow systems, the first time this combination had been installed in Hungary. Mr Bárány explains, “With our shortage of labor and with high staff turnover in difficult jobs, it was important for us to try to make these easier and physically less demanding. Since installation of the new systems the front end of our plant has gone from being the worst place to work in to being the best. We have many other benefits too. We have reduced our head count. Birds arrive at the plant in better condition. Controlled atmosphere stunning allows us to operate at much higher hourly throughputs with fewer empty shackles. We have a better bleed out. We have higher fillet quality, which means less need to trim. In short, yields, quality and overall efficiency are all up.”

Minimal Bone Complaints

Upgrades continue on the back end of the plant. Mr Bárány continues, “We were operating manual cone deboning lines but needed to increase fillet production. This meant we had to automate. A core partner recommended Marel Poultry’s Front Half Filleting system FHF-XB, as in their experience this system gave the lowest residual bone complaints. Being able to keep these to an absolute minimum is almost more important to us than the extra back meat that the FHF-XB system, known to have the highest meat yield in the market place, will give us.”

So Far So Good

Master Good is happy with progress so far. In Mr Bárány’s words, “The Marel Poultry colleagues we work with are like family to us. Life always brings problems. We know, however, that when they happen, we can rely on Marel Poultry to help solve them quickly. We have total confidence in the company’s expertise and its commitment to us. Being totally vertically integrated, we have the right structure. We will now have to concentrate on being efficient as we can.

This will mean even more automation. For this, we know we definitely have the right partner in Marel Poultry.”

About Master Good

Master Good is a vertically integrated Hungarian broiler operation based at Kisvarda in the North East of Hungary. It is wholly owned by the Bárány family, Hungary’s oldest poultry breeding dynasty. The current company was founded in 1994, starting with just five employees. In just over twenty years it has developed into the largest broiler processing business in Hungary, employing more than 2,000 people. It has its own hatcheries, breeding and growing farms, a feed mill, a primary processing plant in Kisvarda and a further processing operation in Petnehaza. It is responsible for almost 40% of chicken meat produced in Hungary.

Master Good produces a wide range of fresh broiler products, whole, cut and deboned. Its free range chicken are used by Hungary’s top chefs. Master Good sells both domestically in Hungary and to other European, African and Asian markets and to Canada. It is one of the major suppliers to McDonald’s and is one of the very few suppliers of chicken meat products to Tesco UK based outside of the UK.
Marel Poultry has developed an integrated automated solution for the consistent production of cubes with exactly the same weight and shape. The well thought-out Automated Nugget Line consists of two I-Cuts, a SpeedSort, a SingleFeed and a StripPositioner, all working harmoniously together to produce “perfect”, uniformly shaped nuggets, in accordance with customer specifications.

**HOW IT WORKS**

First of all, an optional Breast Splitter can turn non-frozen butterflies into half breast fillets which enter the first I-Cut 122. This portioner produces a smaller fillet by cutting off several strips of equal width. Thanks to an intelligent software program, all of this is precisely measured to help you generate the lowest give-away.

SpeedSort, which opens and closes in the blink of an eye and exactly on time, sends fillet and strips on their own way. While fillets end up on a separate belt, moving away to further processing and packing, SpeedSort discharges the strips to the SingleFeed.

**SINGULATE**

Next, the strips must be singulated, as they are too close to each other and not properly aligned for feeding into the second I-Cut. SingleFeed takes care of that. Using vacuum, it “lifts” the humified strips one by one to a conveyor belt. Upon leaving the SingleFeed, the strips should be positioned lengthwise for the second I-Cut. The brand new StripPositioner successfully orients the strips in this way, keeping enough space between them to present them optimally to the second I-Cut 122 for the last stage of portioning. This portion cutter then cuts the strips into precise cubes, to be sold as skewer cubes, nuggets in the US and karaage in Japan.

**LABOR SAVING CUBE CUTTING**

Cubes cutting is usually very labor intensive. The Automated Nugget Line does everything automatically with no need for manual singulation or positioning. Operators are only necessary for quality control. Compared to a conventional, manually loaded portioning machine, the Automated Nugget Line can save at least two people per shift, while throughput can increase by up to 30%!

The Automated Nugget Line produces uniform whole muscle nuggets cut to the customer’s specified fixed weight and dimensions. Give-away is amongst the lowest in the market while labor is minimal. Combining high throughput and impressive reliability, the Automated Nugget Line achieves highest added value.

**GO TO:**

marel.com/NuggetLine
IRIS and SmartWeigher advance Philippine toll processing

May Harvest aims to be best in class

Philippine poultry processor May Harvest has invested in a 6,000 bph (100 bpm) greenfield facility, expandable to 10,000 bph (166 bpm). As it includes advanced technologies from Marel Poultry such as Stork IRIS vision grading, SmartWeigher, Innova software and a completely automated evisceration department, this is not only one of the largest but also a trendsetting plant in the country.

In its earliest days, May Harvest started up its processing activities using a 2,000 bph Stork line which would later be expanded to 3,000 bph (50 bpm). Today, May Harvest has invested in a 6,000 bph (100 bpm) greenfield facility, completely equipped with Marel Poultry systems and allowing for future growth to a capacity of 10,000 bph (166 bpm). “We are an ambitious company that always wants to be a step ahead of the market. It is for this reason that we are continuing with our cooperation with Marel Poultry as the premium supplier of the highest quality equipment available in the world. Other Philippine processors may opt for cheaper solutions, but we want to go the extra mile simply to be the best in class!” says Claire Gallardo, May Harvest plant director.

The current building will be extended with a new “greenfield” wing for the expansion. The existing line will be kept in operation until the new line is up and running. After that, it will be dismantled and new cut-up, deboning and further processing equipment will be installed in this part of the plant.

TOLL PROCESSORS

In the Philippines, the major players in the market are large, vertically organized food companies. These contractors outsource all their slaughtering activities to multiple so-called “toll processors”. The contractor supplies the live birds to the toll processor and comes back to collect the end products, which can be whole grillers or cut-up pieces. 100% of the toll processor’s production is returned to the contractor. It is the contractor who then distributes the products to fast food chains and restaurants.

Although a large part of the poultry industry in the Philippines is still held by the wet market, QSR restaurants such as KFC, Kenny Rogers Roasters, Jollibee, Chowking and McDonalds can be seen everywhere. Consumption is up and more than ever, processed chicken is needed. That is why contractors are asking toll processors, such as May Harvest, to expand capacities.

PRIMARY

Marel Poultry is May Harvest’s main supplier for the primary process; from live bird shackling to the high-frequency water bath stunner, from the killer and the bleeding trough through to the scalders and pluckers. In the evisceration department, after transfer via the Stork TR-DE rehanger, machines such as the combined VDC-20 vent cutter/opener and Nuova-24 eviscerator perform their tasks. The NIC neck-inspection machine features an integrated inside outside washer and is followed by a FIM RotoVac Final Inspection Machine.

SPECIAL CUTS

Fast food restaurants in the Philippines insist that each cut piece of poultry meat is the exact same bite size, therefore requiring the same cooking time is needed for each piece. Larger chickens must then be cut differently than smaller chickens as to not provide portions that are too big. This has resulted in special cuts, which can provide anywhere from four or six cut pieces and at times, as many as nine to twelve cut pieces. At the moment, May Harvest is doing these special cuts by hand but intends to automate the more common eight to ten piece cuts in the second stage of their upgrade project. As May Harvest expects the demand for deboned products to increase, the company will also start deboning breast caps and anatomic legs. A separate cut-up line will be installed for this with breast deboning being done automatically and leg deboning manually.

MORE CONTROL

To ensure that all cut products are the same exact size, it is useful to know more about product weights and quality grades in the preceding grading line. For this reason May Harvest decided to install the IRIS vision system and SmartWeigher directly after chilling. Both of these solutions are supported by Innova software, which also extends into the primary process, keeping track of flock numbers. This satisfies the contractor’s wish to have more control of the process to ensure accurate reporting and traceability. Claire Gallardo says, “For Philippine standards, we have made significant steps towards advanced, high-tech poultry processing.”

About May Harvest

May Harvest is a long-standing customer of Marel Poultry, both companies being partners since 1995. It is located in Santa Maria (Bulacan), on the main island of the Philippines, 30km north of Metro Manila. This region, with its dense population, is also the largest market for poultry products.
The 3-piece convenience line can create a wide variety of coated end products, such as pure whole muscle high quality products, for instance schnitzels or tenderloins, and (partly) emulsified products, such as nuggets and patties. This set-up combines high volume production with a high degree of flexibility and unrivalled product consistency, which is crucial for processors. It allows them to offer a wider range of products, thereby adding significantly more value. Its high capacity makes this line suitable for bigger QSR suppliers, producing large batches with hardly any change needed.

The 700mm (27.5”) wide line can run at high speed, up to 25 meter (82 ft) per minute. This results in a production volume comparable to a standard 1000mm (39”) line. The 700 set-up has a smaller footprint and is much more flexible, which is important when products change frequently. For central process control, the line can be connected to Innova Food Processing Software.

REVOPORTIONER WITH HELIX

The world famous RevoPortioner can produce a wide range of convenience products, from well-known classics such as patties and nuggets to natural looking and 3D products. It is capable of both high volume production and the smallest of batches. With virtually no meat loss, the ability to portion whole muscle products without emulsion and with the lowest possible cost of ownership, Helix Drum Technology is the next step.

Helix Drum Technology changes rotational intermittent low pressure forming into continuous filling. The key element of this technology is the design of the RevoPortioner forming drum. In the patented Helix Drum, product forms are no longer arranged along a straight line but follow a diagonal line. This results in continuous filling with flattened pressure peaks for the meat pump and virtually no start-stop moments, enabling processors to further improve coating performance and prepare for future expansion.

BETTER BATTER

The Active Batter Applicator moisturizes a wide range of products with egg white, batter or other suitable immersing agents. The bottom of the product goes through a bath filled with batter, while several batter curtains wet the product on the top and sides.

Unique is the option to create an active bottom bed, assuring that the product is directly put in batter when entering the machine, hereby preventing belt marks on the product. A precisely calculated air-knife blows off excessive batter. Marel’s Active Batter Applicator lays the ideal foundation for a flawless layer of crumb. Improved pick-up control and the ability to handle thicker batter at high speed both result in high volumes of high quality products.

REVOCRUMB – THE ART OF COATING

The new RevoCrumb produces perfectly breaded products with uniform crumb distribution on all sides of the product, thanks to a new designed crumb management system. RevoCrumb features a revolutionary transport mechanism containing a revolving water wheel which carefully conveys the crumb, unlike commonly used grinding augers.

RevoCrumb allows for high speed further processing while guaranteeing perfect coverage of the product on both upper and bottom side. The sophisticated crumb management enables various kinds of crumb distribution: equal over top and bottom or specific over top and bottom. Crumb structure remains intact during processing, as the RevoCrumb doesn’t grind or crush crumbs, which makes it particularly suitable for very vulnerable crumbs such as coarse panko or cornflakes.

GO TO: marel.com/RevoCrumb

Marel Poultry convenience line offers profitable advantages

New Helix Drum and coating equipment

Marel announces a next step in low pressure portioning and coating. Combining the innovative Helix Drum Technology for RevoPortioner with the new Active Batter Applicator and the new RevoCrumb in a 700mm (27.5”) line set-up unlocks new profitable processing opportunities.
According to Alain Deschenaux, production manager at Micarna, a major meat producer in Switzerland, it is necessary to find the correct balance between breast and thigh products. “Thanks to Marel Poultry’s solutions, we are able to optimize meat yield and productivity, thereby reducing production costs.”

“Eight years ago we had an overproduction of thighs. That is why we have paid more attention to deboning thighs. We use this meat now to produce both deli meats and specialties such as chicken nuggets, fresh or marinated thigh steaks, thigh burgers, minced meat, meat balls and other processed products, mainly for the fresh market. In eight years we have grown from 8 tons of boneless leg meat a week to 40 tons!”

“Of course you need to have a certain balance between thigh meat and breast meat,” explains Alain Deschenaux. “For example, to produce our burgers, we only use thigh meat and not mechanically separated meat. We have clearly chosen to develop high value thigh products. Consumers appreciate them and find that a thigh meat skewer remains juicy and tastier without being dry.”

“A CRUCIAL ANATOMICAL MODULE
Micarna recently added a JLR anatomic module to its Stork ACM cutting line. “If we want to add maximum value to deboned thighs, an accurate cut is extremely important. If cutting results are only average, they can’t be improved afterwards. The anatomical module and its settings must be optimal and reliable. We have high expectations! The bottom line is to leave as little meat as possible on the back and to use the thigh as much as possible. By deboning a wrongly cut, damaged thigh, we would lose meat yield and productivity,” says Alain Deschenaux. “The module must be sufficiently agile to handle both large and small thighs. This is the only way to debone an entire flock. We have already noticed that this is the really strong point of the JLR module.”

Micarna values Marel Poultry’s knowledge and support

**New opportunities for Swiss poultry**

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GO TO:
micarna.ch

About Micarna

Micarna was founded in 1958 in Courtepin, a village in western Switzerland. Today, Micarna is the main producer of meat, poultry, fish and eggs in Switzerland, employing more than 3,000 people. Micarna belongs to the Migros distribution group and offers a wide range of meat in Migros stores and external partners. Micarna’s production spans more than 20 sites and focuses on the two major sites of Courtepin and Bazenheid. From raising parent animals, incubating eggs and raising poultry, to processing and the presence of end products in the shops, Micarna is responsible for the entire poultry value chain. Micarna’s poultry division realizes most of its turnover through Migros.

**OPTIGAL**

More than 90% of Micarna’s poultry products are produced under the Optigal brand. Optigal guarantees the highest quality of meat from broilers that have benefited from a growing program based on high standards for animal welfare and sustainable development.
There is a high market demand for whole products, portions, deboned meat and further processed items, which reflect both Anglo-Saxon eating traditions and, increasingly, flavors from around the world.

**THE PERFECT MATCHMAKER**

Given the wide range of different end products offered, the trick for processors is to put their valuable raw material into its most profitable form. This means matching it as closely as possible to incoming orders from customers. To do this, Baiada, Golden Cockerel and Hazeldene’s in Australia and Tegel Foods in New Zealand have chosen Marel Poultry to supply the perfect solution which ticks all the boxes!

This solution consists of a single high-speed whole product selection line transferring products automatically to ACM-NT automatic cut-up equipment. The selection line can handle 13,500 products per hour (225 bpm) and can feed up to three ACM-NT systems. A single automatic ACM-NT cut-up system can cut up to 7,200 products per hour (120 bpm).

**ACCURATE WEIGHING AND GRADING**

Products from the chilling system are weighed and graded for quality on the selection line using SmartWeigher and IRIS technology. The weight and quality grade of each product will determine whether it is selected for sale whole or cut into portions. In both Australia and New Zealand, whole products, which are predominantly fresh, are sold in bags in 100g weight bands from 900g to 2500g (2 to 5.5 lbs) and above. IRIS assesses both the front and back of each product and can pick up broken wings, red tails, bruises, stains, residual feathers and skin damage. The intelligent SmartWeigher weighing system compensates for vibrations and tares each shackle individually. Both systems have been designed to work with precise accuracy at today’s highest line speeds.

**ACM-NT DOES ALL THE CUTS**

Products not released for sale whole are transferred automatically to ACM-NT automatic cut-up equipment. At the same time information on the weight and quality grade of each product is transferred too. At this stage it is worth noting that IRIS grades not just the whole carcass but also its seven individual portions (two wings, two thighs, two drumsticks and breast). Products are usually cut into midwing, drummette, whole wing, front half (barrels), breast, split leg, thigh and drumstick portions.

Local specialities for the grill such as Churrasco (whole product split longitudinally in two but kept together by uncut breast skin), “Maryland Supreme” (anatomic leg), “Cutlet” (anatomic thigh) and “Lovely Leg” (skinned drumsticks with removed sock bone) portions are also catered for. These systems are able to handle the wide range of weights processed in Australia and New Zealand (1.5kg to 5kg (3.3 to 11 lbs) live weight). When two systems are installed, one system is usually set for the smaller products and the other for the bigger products. The systems also include duplicate by-passable modules for smaller and bigger products.

**CENTRALLY PROGRAMMED AND MANAGED**

Diverters positioned under individual modules can separate “A” grade from downgrade portions, allowing these to be collected and packed separately. These same diverters can also separate light and heavy portions of the same type. Whole bird selection and cut-up lines are Innovia PDS controlled. This allows production planning to manage minute-by-minute the packing of whole products and the cut-up operations. It also gives detailed up-to-the-minute information on what has been processed and how individual customer orders have been and are being met, presented in an operator-friendly format.

**PREPARED FOR THE FUTURE**

Over the past three years some ten of these systems have been sold and installed in Australia and New Zealand. The positive result seen in their operations has convinced users such as Baiada and Tegel that they made the right choice. Recent Marel Poultry developments, such as the launch of high throughput thigh deskinning and deboning modules, will help ensure that all processors are well equipped to meet the future challenges of their growing markets.

**Lifting profits down under**

Well equipped by Marel Poultry to meet future challenges...

The kiwi is the national symbol of New Zealand; the flightless emu makes you think of Australia. In both markets another flightless bird, the chicken, has established itself as a firm national favorite. At 47 kg (103 lbs) per capita per annum Australians are amongst the most enthusiastic chicken meat eaters in the world. New Zealanders eat some 10kg (22 lbs) less, still considerably above the first world average. In both countries, it is expected that this impressive growth of chicken consumption will continue well in the future.
The digital cookbook 2.0

Innova Recipe Manager - consistency builds trust

Globally, there’s an increasing demand for convenience food and snacks. The preparation of further processed food requires precise and consistent recipes, which should offer maximum food traceability and batch control. The new Recipe Manager in Innova is specifically designed for such real recipes – basically it’s a digital cookbook 2.0!

When you have an order for marinated chicken breast fillet, Innova’s Recipe Manager is at hand to help prepare just the right ratio of chicken breast and marinade sauce. The individual spices to be added can all be digitally formulated and this will make exactly the right marinade. The Recipe Manager is capable of producing every end product you want, such as hot wings, nuggets, garlic&lemon breast fillets and all sorts of breaded products, whole muscle or minced. Innova’s Recipe Manager can even compose the recipes of how to make mince as well as the marinade itself. Eventually it will be even able to make recipes for entire ready meals.

MERGED MATERIAL

The Recipe Manager can be used anywhere in the process where batches of material are merged. “In Innova Recipe Manager, the recipe editor determines the ingredients and sequence of operations needed to make the product,” says Danny Sudlow, Product Specialist Innova Poultry. “But the key words are traceability, batch control and consistency.”

BATCH CONTROL

Once the master recipe and the required batches have been digitally composed in the production control office, the real work (weighing and scanning) can be done in the production facility. The results of the Recipe Manager appear on the operator interface in the factory, telling the operator which tasks to perform.

TRACEABILITY

The Recipe Manager system is paperless, with built-in quality control as well as real-time process control of what goes into the batches and how. The reporting tool shows how Recipe Manager ensures traceability. It shows the exact origin and supplier of all ingredients of the recipe batch, even from which farm and flock of chickens the fillets have come from. In a world where the precise origin of every food item is under close scrutiny, this high level of traceability is an important asset.

GO TO:

marel.com/recipe

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Marel is the leading global provider of advanced equipment and systems for the fish, meat and poultry industries.