

TRUSTED TRAY SEALING: The most cost effective tray sealing solution on the market

Pakistan Food Journal pride ourselves on promoting businesses of the highest caliber within the food technologies sector, bringing readers news of the latest solutions shaping the industry and informing them of the capabilities of many well-established organizations. As a result we are delighted to feature Zultec as our selected Tray Sealing Solution Partner of the Year whilst outlining the company's latest successes, innovations and plans for the future.

A dedication backed by strong experience of over 30 years is what has led Zultec to becoming the market leader in Pakistan. The company simply sells beyond machines; in fact it's the only solution centric organization that has truly provided a synergistic combination of machines, films and trays to offer an entire tray sealing solution. It's extensive range of manual, semi-automatic and fully-automatic tray sealing machines with throughputs from 16 to 150 Trays per minute.

From MAP to VSP – Addressing the needs

If the adage “necessity is the mother of invention” were ever true, it would certainly apply to packaging. All packaging is produced to meet a need, of course, but the greater the need, the more energetic the response. Changing lifestyle surged the demand for convenience foods and put more pressure on retailers to keep stocks. However the biggest challenge was to offer a longer shelf life to meet retail needs. Packaging experts looked at tray sealing as the way forward where trays could be evacuated and backflushed for shelf life extension.



Also changed was the rather rudimentary polypropylene tray and snap-fit lid. It came a PET / CPET tray and flexible film lidding material that included a layer of EVOH for better gas barrier. With these packaging improvements, shelf life went from 3-5 days to over two weeks.

Retailers confronted with shrinking sales densities are trying to reduce their exposure to food waste and this is not possible without deploying the correct packaging technology. MAP helped but this generally is not sufficient when it comes to the cut throat competition in shelf appeal and efforts to reduce food waste. The general problems associated to seal integrity due to gas expansion are still there. This gives a reason for our next packaging evolution. Speaking with us on new packaging trend in Vacuum Skin Packaging (VSP), Zultec Global Product Marketing Head said “Meat packaging is altogether changing. As the contents in the tray are securely held, the product is closely surrounded by its marinade, allowing it to fully develop its flavour. This leads to excellent aroma and perfectly tender meat. The TraySkin system not only offers meat quality, but also protects the product inside the securely sealed tray. And the Easy Peel system means the skin film can be removed quickly and with minimum effort.”

A strong materials grip

Just as important as having good tray sealer machine, the right choice of pre-formed trays and flexible lidding film's role is also inevitable to achieve the perfect seal for your pack presentation and its freshness. Zultec has partnered with Linpac to start trays manufacturing units on 18,000 SQM of space which brings Zultec in a league of premium solution providers offering customers a high performing complete pack solution.

Traditionally, Polypropylene (PP) has been the material of choice for meat packaging, but limitations in terms of its environment credentials, barrier performance and shelf appeal have resulted in increased demand for Rfresh PET Packaging. PET has been a popular choice for meat packaging for some time but the full range of benefits that the material has over PP are just beginning to be recognized by packers and retailers. Beyond the aesthetic benefits given by PET's clarity and sparkle, lie environmental credentials and much better barrier performance. Trays manufactured using rPET laminated to PE can be sealed at reduced temperatures in comparison to PP trays and in result use less energy. For example, to seal 70 million PP trays at 200° C requires 196,000 KWH of energy compared to 131,000 KWH to seal the same number of rPET / PE trays at 150°C.



The novel design uses a patented sealant on the tray flange to create a secure seal with the lidding film, removing the industry standard laminated PE base film and creating an rPET tray which is 100 percent recyclable at the end of its service life.

The unique sealing system, which has been in development for two years, has consistently outperformed competitors. Rfresh Elite offers the strongest seal strength in its class – a 60 per cent improvement in burst test strength and 2 per cent in vacuum chamber testing compared to standard PET/PE packs - delivering excellent pack robustness to enhance shelf life and reduce food waste. The excellent seal quality results in less packs failing during packing and transit, down from three-four per cent to less than one per cent. For retailers, the tray properties will minimize mark-downs and back-of-store waste.

The other key component in Zultec's tray sealing concept is the clear lidding material applied to the tray. Extruded by Linpac, it includes an EVOH layer for gas barrier and incorporates sealant and self-venting properties that complement those in the tray. As the food heats in the microwave oven and begins to produce steam, it causes the lidding material to expand dramatically to form a small dome over the tray, and in this dome the food is steamed evenly and thoroughly. Just before the stipulated cooking period is complete, the lidding material self-vents so that the package does not burst.

Cost effective tray sealing

What continue to lead the retail packaging revolution is vacuum packed skin packs. Vacuum skin technology consists in the sticking of two plastic materials. As a result, the cover film is stuck to the tray in the area where there is no product, enhancing its presentation and shelf life. The growth in popularity of skin packs and other new formats for meat and poultry products, such as MAP gas flushing and Vacuum MAP sealing, is creating additional challenges for equipment and consumable suppliers.

Zultec's newly developed trays manufacturing plant which is a Joint Venture with Linpac allows the company to develop a lightweight shallow rigid tray which is competitive alternative to the standard sheet skin packs traditionally used in VSP. These trays are fully

recyclable and suitable for all three application styles – Normal VSP (below the flange protrusion), Protruding VSP (slightly above the flange protrusion) and Super-protruding VSP (High protrusion above the flange).

On part of tray sealing machines, an element of future proofing is vital, so that food manufacturers have the reassurance of knowing that they will have the capability to handle the latest packing trend without the need to invest in new kit every time.

Zultec offers the most cost effective tray skin solution for the retail markets. With an array of tray sealers from semi-automatic tray sealers for retailers and small scales producers to automated tray sealing machines for large scale food processing plants, the Italian Pack range of machines can run atmospheric, MAP and Skin Pack all on one tool. The recent launch of Olympus Tray Sealer in Pakistan brings this closer to the reach of smaller producers who are looking for a cost effective solution.

Unlike other semi-automatic tray sealers that are often perceived slow, Olympus offers rotating turntable which considerably cuts cycle times and optimizes output by allowing you to load and unload trays while the machine is completing the cycle in the second vacuum chamber. Olympus can pack up to 16 MAP trays, 28 sealed trays and 12 skin trays per minute. Die changing takes less than 2 minutes and the price at which they provide custom dies literally help you to choose from an extensive range of tray sizes for a perfect customized machine according to your production needs. This flexibility future proofs the investment in Olympus and allows food producers to alter pack formats in future to suit retailer demands without additional investment.

The most important of all is the reliability and scalability. With an integrated Busch vacuum pump, you do not need to worry about long production cycles because these rotary vane pumps are optimized for reliability and efficiency and they are specially designed for foodstuffs packaging with tray sealers and thermoforming machines. Olympus also offers you optional pumps



suitable for high oxygen packaging atmosphere (>21% oxygen).

All controls are offered via 7.2" PLC touch screen for HMI to ensure a successful finished pack. Operating parameters include 99 packaging programs to choose from, temperature control, menu-driven MAP parameters, skin tray and gradual vacuum simplify the machine setup process.

The ability to service is also becoming a major point. Customers want as little need for service as possible. Olympus reliability, coupled with Zultec's service centers throughout Pakistan makes it an ideal and low cost tray sealing solution which is being introduced in Pakistan for the first time.

Talking to Food Journal, COO Zultec Group, Mr. Haider Ali commented "In our approach the product of the client is central, not the packaging machine. Today, we are the only company having strong R&D on materials, machines and films to offer solution based on 30 years of industry experience. This really puts us in the premium league"

About Zultec

Zultec Group is Head Quartered in Saudi Arabia with offices spanning around 23 global locations. We are the leaders in food processing and packaging technologies, serving some global conglomerates since last 30 years. Zultec partners with world known leaders in end-to-end packaging machines for meat, poultry, dairy, fruits, vegetables, ready meals etc. Our portfolio includes completely automated end-to-end processing and packaging lines starting from the point your products are processed to making them packed in retail ready packs. ♦