

Thinking out of the box

- Innovation in the FIBC Industry

From their humble beginnings in 1979, Plastic Extrusions has grown to be a leading innovator in the FIBC industry. With 27 years of experience and a wealth of success stories to their name they continue to set a benchmark for the local and international large bag manufacturing industry. So how do they do it? Embracing an ethos of innovation and technical excellence has proven to be a highly effective strategy in securing the best possible products and solutions for their customers. In 1998 Plastic Extrusions patented a 1 tonne liner for an FIBC aimed at resolving packaging challenges facing the South African sugar industry. The sugar industry was experiencing problems with moisture transmission, pilferage and contamination in the packing of refined sugar. The search for an alternative, innovative means of packaging to resolve these issues was on, and Plastic Extrusions rose to the challenge. When filling an FIBC with a conventional bottle-shaped liner, the liner is placed under substantial structural stress as it pulls down from the filling head once the product begins to fill the base of the bag. This commonly causes the liner to twist and move under this stress, resulting in uneven movement of the gussets on the neck of the liner. Plastic Extrusions designed and manufactured a bottle-shaped liner which, once filled, allows the gussets on the filling spout of the liner to remain in their original flat position, crease free, enabling the neck of the liner to be perfectly heat sealed. But they didn't stop there. In conjunction with the patented liner they manufactured a heat-sealing unit, which is movable on an I-beam placed above the conveyor in a position that is easily accessible to the FIBC. The resulting production rate of sealing, per unit, is 40 FIBCs per hour. This method of packing has proved to be a great success and subsequently has not only become a sugar industry standard in Southern Africa, but is also being utilised in other industries where free flowing dry products are packed into FIBCs. Since the inception of this liner Plastic Extrusions has become a specialist liner manufacturing company able to produce nine different shapes of liners, with the capability of producing in excess of 3.5 million liners per annum. Technology and the latest cutting edge equipment play a vital role

in attaining these high levels of production. Their investment in a state-of-the-art Gunter bag maker specifically designed to accommodate the needs of manufacturers and users of FIBCs has allowed them to diversify their product range, extending their capabilities and service delivery, consolidating their position as an industry leader.

Illovo Sugar

A Case Study in an Innovative Approach to Packing Challenges in the Sugar Industry

Illovo Sugar's Noodsberg mill packing department packs in the region of 100 000 and 120 000 tonnes of sugar in one tonne bags per year. Prior to Plastic Extrusions' neck liner innovation each conventional liner was sealed

reached the customer. The new neck liner developed by Plastic Extrusions addressed these issues by modifying the bag by cutting off the 'shoulders' and later through the new addition of a 'V-shaped' base. These modifications greatly reduced the amount of plastic used as well as production costs. As these liners are heat-sealed and the sugar is about 40 degrees when packed, the air-tight seal allows a vacuum to form in the bag as the sugar cools down - a truly innovative solution. This has streamlined the sealing operation and does not at any point slow down the packing rate. Costs are also saved through the elimination of the need to use wide sticky tape or wire ties. "Plastic Extrusions' continued improvement of their liner and dedication to exemplary service and customer needs has contributed to a superb working



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by twisting the neck closed and using a wide strip of sticky tape or a wire tie to seal it. This somewhat unsophisticated system was far from ideal - it did not produce an airtight seal and there was no way to guarantee that the product had not been tampered with before it had

relationship and has greatly benefited the packing facility and we believe it will continue to do so in the future," says Peter Calitz, Production Foreman Sugar Handling, Illovo Sugar Limited - Noodsberg Mill. According to Illovo Customer Support Manager, Naiem Ally, Illovo Sugar had



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a very positive experience with Plastic Extrusions. “Excellent after-sales service and a willingness to engage themselves with our problems or challenges and lend assistance whenever called upon have been distinguishing features of our relationship with them. An example of their willingness to engage themselves with client needs happened some time ago. Peninsula Beverage Company, the South African bottlers of Coca-Cola products, complained of sugar in 1 tonne bags experiencing chemical contamination. This was of great concern to Illovo Sugar as it meant that there was a possibility that the quality of our product may have been compromised during the manufacturing or packing process. At Illovo we hold ourselves to an exceptionally high standard of product quality and it became imperative that we

determine exactly where and how this contamination was occurring. Plastic Extrusions stepped up to the plate and provided very valuable assistance with the ensuing investigation, and it was due to their diligence and dedication that we were able to determine that the contamination had not in fact occurred during the manufacturing or packing process, but during transit. Plastic Extrusions were invaluable in providing evidence to the client, Peninsula Beverage Company, exonerating Illovo Sugar and allowing the contamination issue to be resolved quickly and effectively. In our experience Plastic Extrusions has shown unquestionable commitment to reducing packing costs, continually striving to develop new approaches and designs for packing our products. Their ongoing efforts to reduce liner thickness without



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compromising the storage life of the sugar has continued to yield exceptional benefits, as have their successful innovations in bag design. Our relationship with Plastic Extrusions has grown from strength to strength and we foresee it continuing to do so in the future, adding value to our business and allowing us to maintain our exceptional levels of quality.” As the above case study demonstrates, the differentiating factors in delivering exemplary levels of customer service in the FIBC industry lie in a strong commitment to servicing client needs and a fresh, innovative approach to products and services. It is about engaging with customers on every level and accepting that their interests are your interests. It is about continually questioning whether a better solution exists and never accepting limitations. In today’s fast-paced, competitive market the leading companies of tomorrow will do more than simply deliver a product. These leaders will be the companies who can out-think and out-imagine the competition, continually striving to improve products and break free from the paradigms of accepted wisdom. As a definitive example of this approach Plastic Extrusions looks set to retain their position as a market leader in Southern Africa and continue to set new benchmarks in the FIBC industry for a long time yet.

