

# Expanding a **Flexible Packaging System**

## Inhalation Solution for Blow-Fill-Seal Ampoules

The Ritedose Corporation (TRC) located in South Carolina, USA, is one of the leading blow-fill-seal (BFS) contract manufacturers and has expanded the capacity of its packaging system several times for the primary and secondary packaging of inhalation solution products. In order to further increase its capacity, TRC put its trust in tried-and-tested Sigpack Systems packaging lines, which have provided the company with highly flexible, high-output packaging systems.

### Future-Proof Concept

TRC operates its packaging lines 24 hours per day, seven days a week. The packaging lines are very flexible with multi-format capability. As an experienced and dependable system provider, Sigpack Systems designed the original system which could potentially have

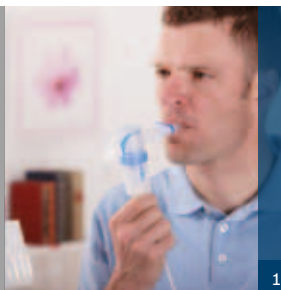
additional packaging legs to further increase TRC's packaging capacity. In explaining the concept behind the system, Jörg Kleiner, Sigpack Systems head of Pharma sales said, "When placing the original order, the customer emphasized the importance of having a system that could be extended in a flexible manner at a later date, and which would be adaptable to changing market needs. Even when adding this extension, we have allowed for the option of incorporating one more packaging leg in the future. TRC had many reasons for deciding in favor of Sigpack Systems when placing the order. One of them was certainly our expertise in designing and implementing complex, multistage, flexible-format packaging systems. TRC was also convinced by the technology used and their satisfactory experience with the previously installed equipment in

their facility. Sigpack equipment can be relied upon to deliver the performance customers want – and TRC knows that."

### Speed and Precision

The TRC packaging system receives the vial cards in bulk containers. A vibratory feeding device unscrambles the vial cards and feeds the products to a double Delta LDF robot cell, which recognizes the vials using a vision system and places them, correctly aligned, into the infeed chain of a pillow pack machine. The precision of the robotic units meets the challenging task of stacking these products at a high speed into the continuously running lug chain of the wrapper. The use of the Delta robot technology keeps format changeover very easy for the operator, by just selecting the new recipe on the HMI and uploading the data by pressing a button.

- 1 Packaging solutions for inhalation drugs
- 2 Hermetically tight packages with user instructions
- 3 Print data verification on the film
- 4 Format flexibility through different carton sizes



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The stacked vials are passed on to the HBL horizontal pillow pack machine. In order to achieve tight hermetic packs, the pillow pack machine is equipped with an air extractor and mechanical gusseting. Water-cooled cover plates above the sealing unit protect the product from radiated heat. A printer then labels the pillow packs with the batch number and expiration date.

In the next stage, the finished pillow packs move on to the product grouping device of the TTL toplayer. At the other side of the toplayer, the cartons for

loading produced on a TTF carton erector are fed in. The toplayer then groups the correct number of cartons for each batch underneath the gripper, forms a stack of pillow packs (the type of stack depends on the packaging format), and loads them into the cartons. Once loaded, the cartons leave the toplayer and move on to the inline closer, which folds down the dust flaps and inserts the front flap. A TBLi case packer then finishes the carton packs for final shipping.

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The modular Sigpack Systems toplayer platform provides the base for almost endless variations. The TBLi case packer and the TTL toplayer only differ in the combination and arrangement of their modules. For example, the case packer does not always require a sophisticated grouping device as this function can also be carried out by a more straightforward transfer unit. In addition to its reliability in continuous use, the entire Sigpack Systems toplayer family is notable for its rapid and reproducible format changeover, without the need to change a large number of parts.