

# Newsletter



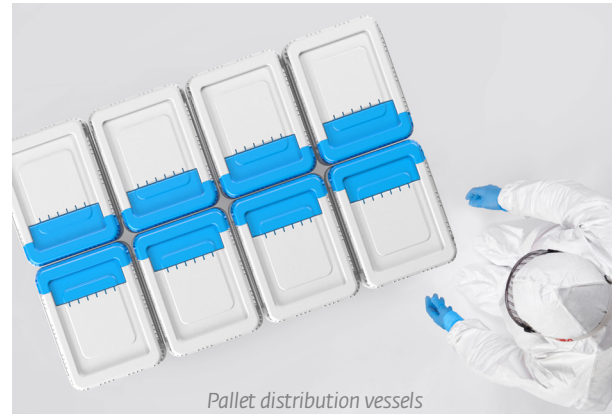
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## **Rectangular drum with sliding lid closure for CurTec**

CurTec designs, produces, and distributes high-performance plastic packaging such as drums, pails and jars, which are used in the pharmaceutical, chemical and food ingredients industry.

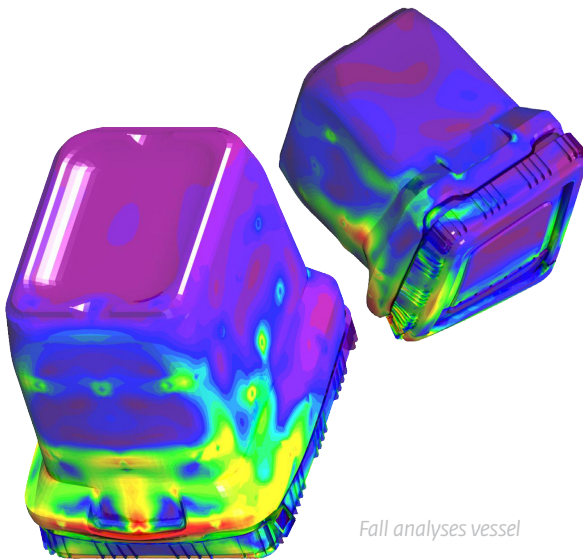
Their new rectangular drum has a great advantage in efficiency in transport and storage over round drums. In addition, the drum is conical, making it nestable and efficient to transport empty. The drum and the corresponding lid are made of HDPE.

BPO assisted CurTec in the development of the new vessel. The sliding lid closure reduces handling time but presents a technical challenge when it comes to the seal between the drum and lid. A round vessel is typically sealed with a twist closure and circular seal. This is not feasible for a rectangular drum. CurTec has developed a new solution for this that slides and then closes the drum. To make and keep this seal secure, even during a drop test from a great height and with a volume of 40 litres, BPO has performed FEM analyses and has given advice.



*Pallet distribution vessels*

The stresses and strains in the HDPE in the simulations were used by BPO to assess whether the vessel and sliding lid could break due to impact in the event of a fall. The deformations were used to check whether the lid does not come away from the drum too far. Because in that case the seal will no longer be sufficient, and leakage will occur. The optimal interface between the lid and the drum, such as ridges and other possible constructions, was sought in various simulation steps.



*Fall analyses vessel*



*Rectangular vessel*

BPO has assisted from the first concept development with simulations and advice on the strength and stiffness of the entire keg and in particular the new closing mechanism. Complex drop analyses were performed to assess whether the closure remained operational, and no leakage would occur.

More information about this new product can be found at [www.curtec.com/en/products/drums/rectangular-drums/detail/rectangular-drum-40-liter](http://www.curtec.com/en/products/drums/rectangular-drums/detail/rectangular-drum-40-liter)



*Opening of lid with sliding mechanism*

2022

volume 29, number 3

December



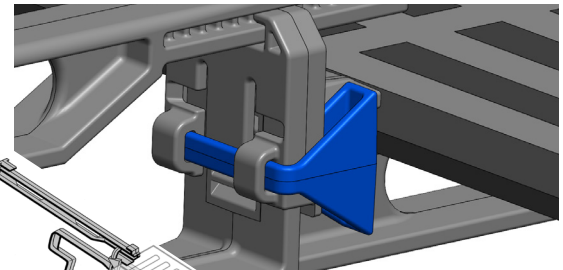
## SOLYCO SOLO Solar System

Last month, the new SOLYCO SOLO Solar System was released. SOLO is developed as an elegant alternative to conventional solar systems. The hooks fit into the roof tile rows and are also perfect for small and/or fragmented roof surfaces. The system allows for a small distance between the modules, which guarantees an efficient use of the available roof space.

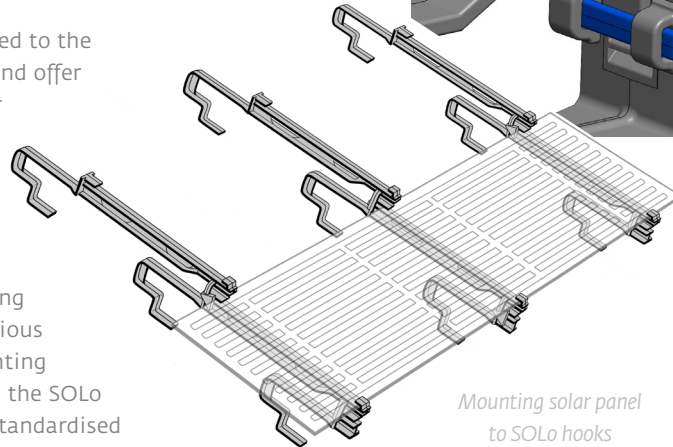
BPO has codeveloped the SOLO hooking system and mounting method. The slim hooks are produced from a glass fiber filled plastic and are pushed under the roof tiles to be fixated.

The hooks are then secured to the underlying roof battens and offer an attachment option for the compact glass-glass solar panels on the outside of the roof. SOLO can be installed very quickly and without any tools or railing system. Due to the ingenious construction of the mounting system that BPO created, the SOLO Solar System forms one standardised solution that can be used with roof tiles of different heights and thicknesses.

The hooks form an assembled system on the roof, which achieves a high stability with low weight.

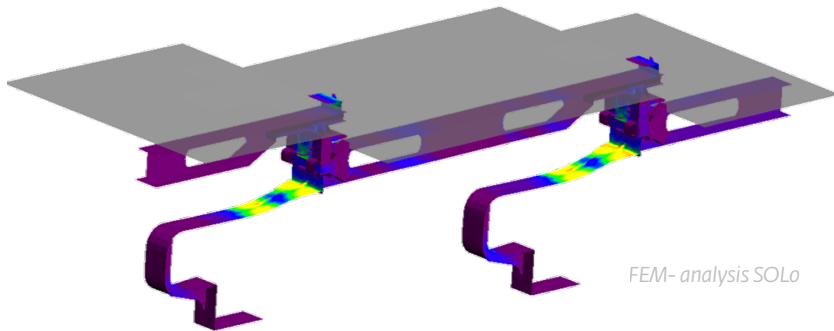


Securing the hooks



Mounting solar panel to SOLO hooks

BPO has performed FEM- and Moldflow analyses, to make sure the product meets the technical requirements with as low as possible weight and costs. The frameless crystalline SOLO modules are hooked up in three hooks each, secured and wired.

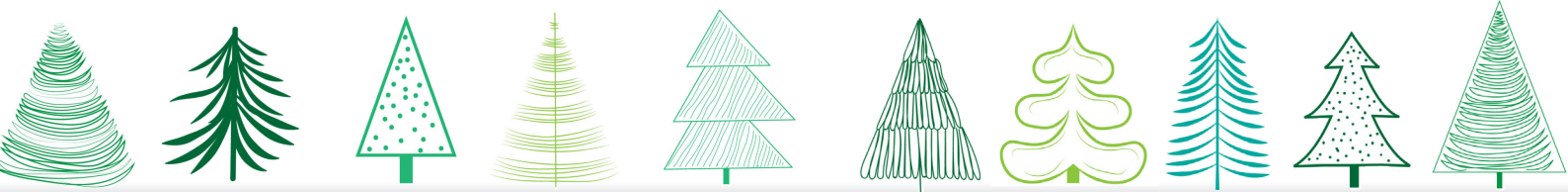


FEM-analysis SOLO



SOLO hooks

Would you like to know more about the SOLYCO SOLO system? Visit [www.solyco.com/en/products/solo/](http://www.solyco.com/en/products/solo/).



## Happy Holidays!

At the time of publication of this newsletter, we are in the last weeks of 2022. The COVID-19 vicissitudes of previous years will be overshadowed in 2022 by the war in the Ukraine, resulting in a lot of human suffering and economic uncertainty.

Fortunately, we are well able to follow our passion to continue developing and optimizing beautiful products and

thinking about how to give concrete substance to sustainable product development.

This is only possible for our clients, suppliers and relations. We would like to thank you for the trust and the pleasant cooperation during 2022! And may we continue this in the future. We wish you happy holidays and a healthy and prosperous 2023!