

## Clamping Unit of the Elios 4500 with Fully Electric Drive Concept

# Higher Output and Reduced Energy Consumption

Thin wall packaging manufacturers think in terms of efficiency gains in tenths of a second. Every cycle time reduction leads to increased productivity. Another factor influencing part costs is the energy efficiency of the production equipment. In these two key dimensions, Netstal was able to optimize the smallest model in the Elios series with 4500 kN clamping force. "By intelligently redesigning the actuating elements in the clamping unit, we were able to completely eliminate the hydro mechanical part of the drive and thus realize a purely electric drive train. For our customers, this makes the Elios 4500 even more productive. At the same time, they achieve further savings in electricity costs," says Marcel Christen, Product Manager at Netstal.

The result in figures: the drying time of the Elios 4500 is reduced by 0.1 seconds to a new 1.4 seconds. In relation to the Euromap dry cycle, energy consumption is reduced by 7 kW. The elimination of the hydro mechanical components for operating the toggle lever also results in an overall machine length that is 450 mm shorter. "This is an advantage for our customers that should not be underestimated, if the space saved in the production hall can be used profitably elsewhere," adds Marcel Christen.



The optimized Elios 4500 with electrically operated toggle levers enables users to achieve cycle time reductions and savings in power consumption (the photo shows the previous variant). © Netstal

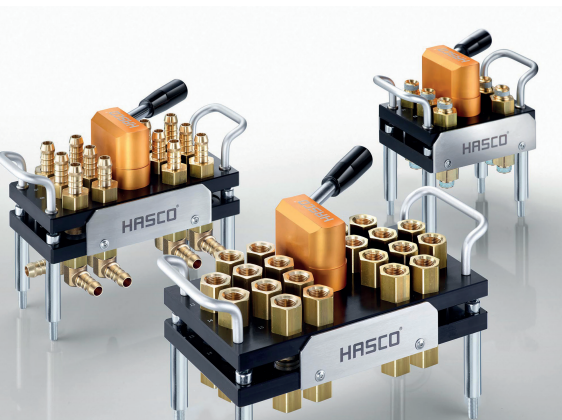
In the clamping units of the larger variants with 5500, 6500, 7500, 8800 and 10,000 kN, the unique, patented drive concept for actuating the toggle lever continues to be effective. "For the higher clamping forces, the hybrid drive remains the ideal synthesis to ensure the optimum combination of speed and energy efficiency. It consists of an electrically driven double gear rack and pinion and a synchronously interacting hydro mechanical actuator that ensures the build-up of the maximum clamping force," explains Marcel Christen.

With the highest speed and the best energy efficiency on the market, according to Netstal, the Elios has been delighting renowned customers worldwide since its market launch in 2016. The dry cycle time ranges between 1.4 and 2.2 seconds, depending on the model. The energy efficiency of the machines is ensured, among other things, by the recovery of kinetic energy, which is reused in the form of hydraulic energy in the overall system.

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## Multicoupling System

# Standard System Largely Extended



The multicoupling system is available in many variants. © Hasco

The innovative Hasco multicoupling system allows the central connection of several cooling circuits in a single step and offers numerous process optimization advantages, according to the company. As a result, setting-up procedures can be carried out quickly and easily by hand. Through the defined allocation, there is no risk here of mixing-up the different cooling circuits and hoses.

The largely extended standard system is available as an open or a closed system with valve. The clean break system with flat sealing front surfaces re-

liably prevents the leakage of cooling fluid when decoupling.

The modular structure allows individual configurations as well as simple integration into existing systems. 6, 12 and 20-fold systems are available, whereby the couplings can be replaced without dismantling the hoses. The multicoupling system is available with a large number of different shut-off couplings and shut-off nipples. These include versions with inner or outer thread, Push-Lok or hose nipples, which further round off the extensive range

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