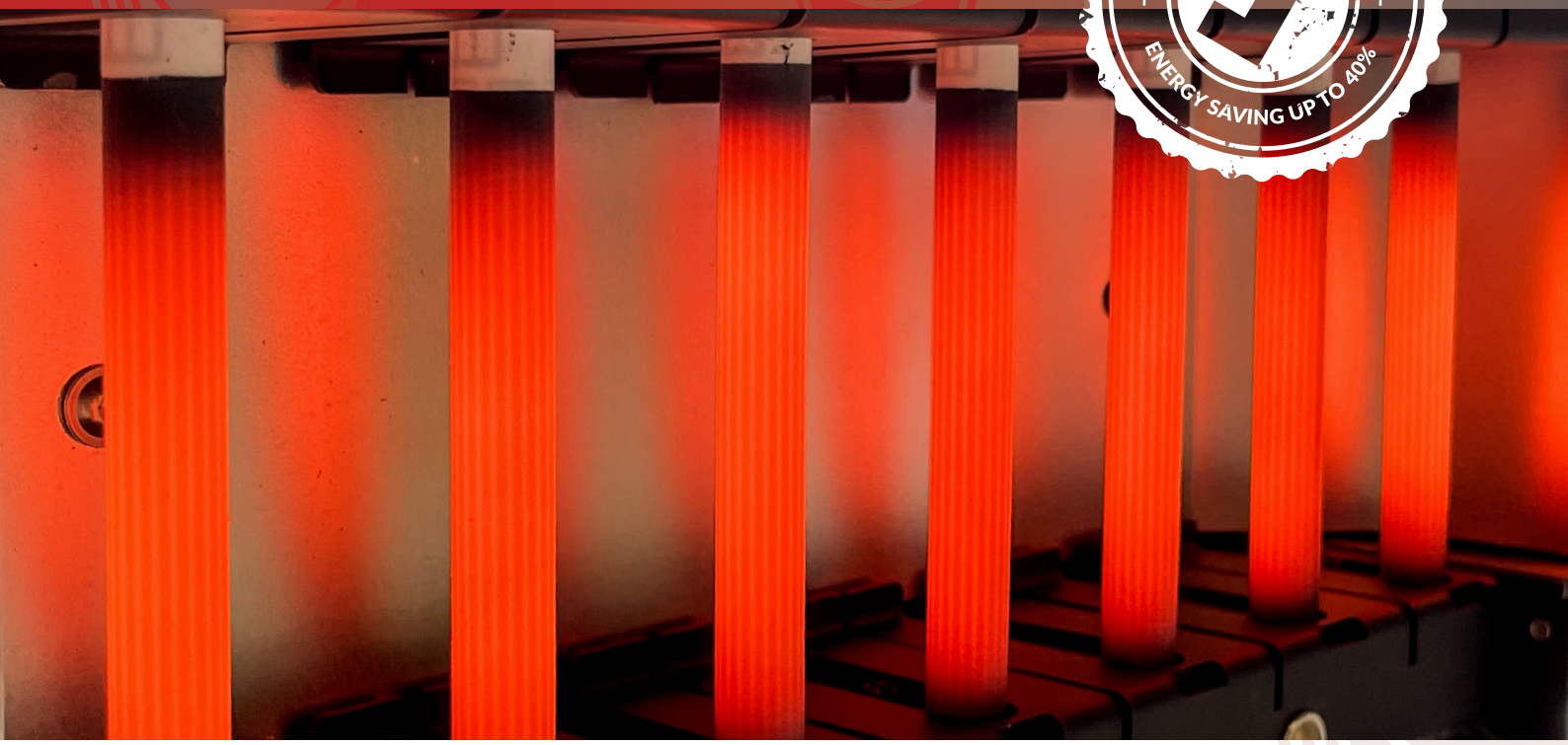
THE NEW GENERATION OF DRYERS

SAVE UP TO 40% ON ENERGY COSTS

HIGHEST DRYING - EFFICIENCY

ENERGY SAVING UP TO 40%



DarkWave - the exhibition Highlight

- Up to 40% energy saving
- Almost identical drying behaviour with CMYK
- Usable on papers and foils
- Subsidies / Fundings possible

Upgrade your production for more sustainability!

DarkWave

WE CREATE SOLUTIONS

DUO-TECHNIK

PRODUCTS FOR PRINT

Case Study - DarkWave

How to...
... „create the future“ for more sustainability?
... save costs for more competitiveness?

The best example to give the answer on these two challenges is one of our customer from the furniture industry in Germany.
Their business is to print high quality surfaces for the furniture industry. Through special printing technologies and ink systems with 12 inking units per machine, they realize breath taking designs in optics and haptics.

The challenge

Our customer has 3 printing and varnishing machines with up to 13 printing units, as well as 2 cutting machines. Special niche solutions, creative decors, reliable, sophisticated reproduction and technically perfect lacquered surfaces are among their core competencies. The range of orders extends from the printing of real metal and thermoplastic films based on PVC and PET up to paper-based edges and coatings for the furniture industry.

To ensure the quality of the printing results and to increase their efficiency, a hot air and an infrared drying system is currently used.
The drawback is that these systems are permanently set to 100% power and cannot be regulated according to orders and requirements.
With energy costs constantly rising, the aim was to save energy in the long term by updating the drying system.

The solution

DarkWave

The new benchmark of drying systems!

Upgrade of production for more **sustainability!**

// The Challenge

- increasing energy prices
- further state requirements for climate protection
- different drying behaviour on materials and CMYK

- up to 40% energy saving
- almost identical drying behaviour on CMYK
- identical heat up input for papers and films
- subsidies / funding possible
- fully autonomous adjustable drying

The whole story

Efficient drying systems play a crucial role in the production chain of the packaging industry. These systems are designed to optimize the drying process in order to shorten production time, improve quality and reduce energy costs, while energy efficiency and sustainability play an increasingly important role.

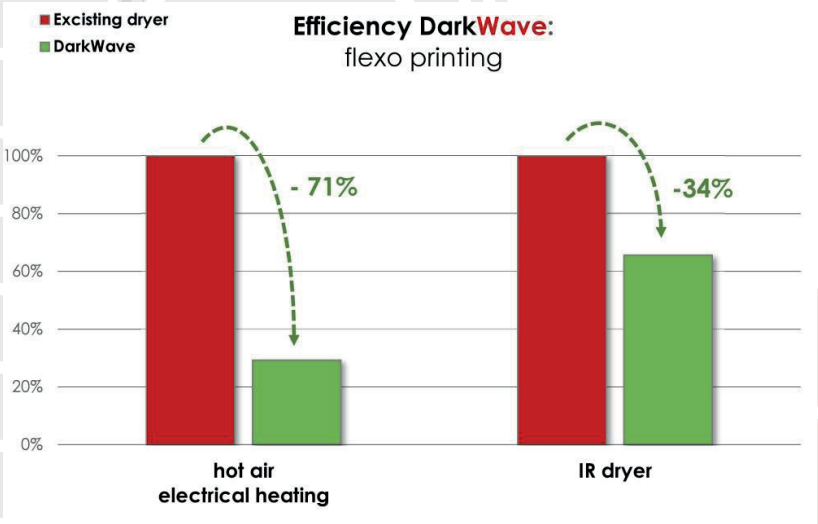
Currently available industrial infrared emitters in the short and medium wave length range have a power peak outside the optimum wavelength range of around 2.6 µm - 3.5 µm and above 4 µm. Wave lengths longer than 4 µm are absorbed by quartz glass. Therefore radiation spectra above 4 µm can no longer be actively used for the drying process.

As a result, only a small proportion of the infrared radiation generated (only 15 to 40 % depending on the power spectrum) can be converted into drying energy. This makes the process inefficient.

Duo-Technik took this as an opportunity to develop a completely new dryer that eliminates the effects described above. The result is

DarkWave - the new benchmark of drying systems

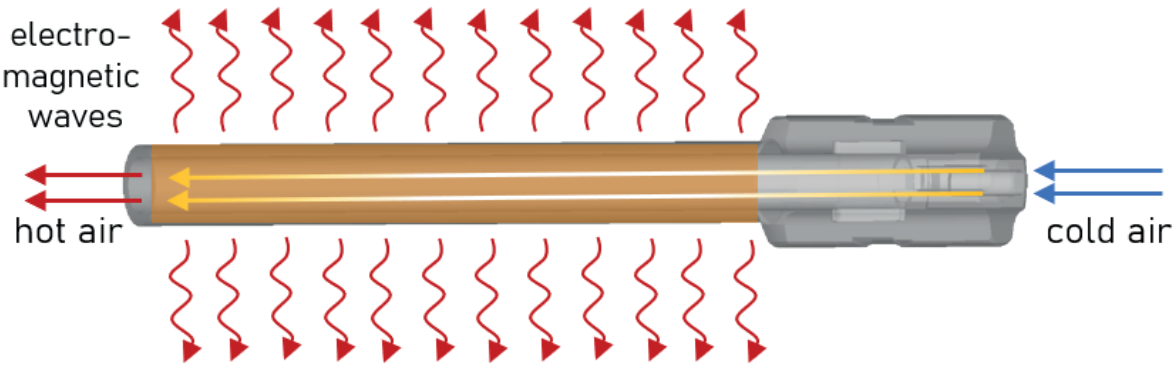
This new type of dryer was developed from theory to practice and put through its paces together with at our customer site. The results shown in the next chart were achieved during regular production and speak for themselves:



Saving energy and **environment** has never been **easier!**

What makes DarkWave so efficient?

The DarkWave dryer uses an energy source to emit infrared radiation and generate hot air. Today's infrared drying systems use two power sources, an infrared radiation source and/ or an external heating coil.



// The increase in efficiency is explained by

- the reduction from two to one power source,
- the elimination of the filter property of quartz glass above 4 µm
- the optimisation of the wave length

Talk to us.
There are interesting funding opportunities!

Service Hotline: +49 (0) 66 41 - 96 95 94 · Service e- Mail: service@duo-technik.de

DUO-TECHNIK GmbH · Im Tiegel 4 · D-36367 Wartenberg · Phone: +49(0)6641/9695-0
Fax: +49(0)6641/9695-40 · e-Mail: info@duo-technik.com · www.duo-technik.com