

# **E+L** Heating Plate



Corrugated GmbH

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### **Erhardt+Leimer Corrugated**

Erhardt+Leimer Corrugated is an experienced specialist in system solutions and automation control technology for corrugators since 25 years now.

To improve the quality and increase the productivity of corrugated board production, E+L offers state-of-the-art products for the automatic web guiding, via control systems for the optimization of the web tension up to the automatic parameter setting of all important production parameters.

The extensive production range includes:

- + Process automation
- + Bridge quantity control and splice synchronization
- + Replacement of obsolete PLC control systems
- + PLC controlled hydraulic loading systems for single facers
- + Stand-alone temperature control systems for pre-heaters and pre-conditioners

Today, the Bielefeld Company concentrates their efforts intensively to the area of inspection technology. With these developments, E+L Corrugated has already successfully entered the converting sector.

In future the intention is to continuing emphasis on increasing board quality and quantity.

Using the automation network ELCorruMatic it is possible, for example, to automate the corrugated production process step-by-step. This approach ensures consistent high board quality and high productivity such that systems can be operated optimally.

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High productivity of the corrugator is increasingly ensured by flexible job order planning - which is reflected in ever decreasing order lengths.

The setting of all production parameters must be correspondingly variable and in less time.

E+L Corrugated has developed a high dynamic heating plate / hot plate in order to implement job-related temperatures in the corrugator double backer as soon as possible during order changes.

The construction of this mass-reduced heating plate guarantees the fastest possible temperature adjustment and an immediate heat transfer.

In addition to significantly reduced energy costs, the quality of the corrugated board is optimized.









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### **Hightlights**

- + significantly reduced energy costs
- + Extremely fast response times
- optimized quality of the produced corrugated board, especially during order changes
- + easy integration into the double backer of various manufacturers

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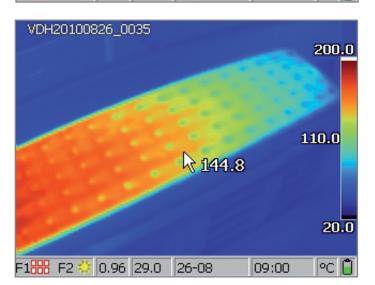
## **Heating-up Curve**

The three heat images indicate the heating curve of a hotplate.

Figure 1, starting with room temperature, shows already after 20 seconds a temperature of more than 85 degrees Celsius.

After 40 seconds, about 145 degrees Celsius are reached, see Fig. 2

Figure 3 shows the maximum temperature of about 190 degrees Celsius is reached after 60 seconds.



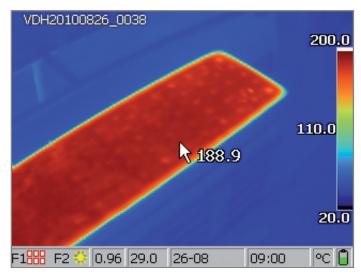


Fig. 1: Temperature profile by means of an infrared camera

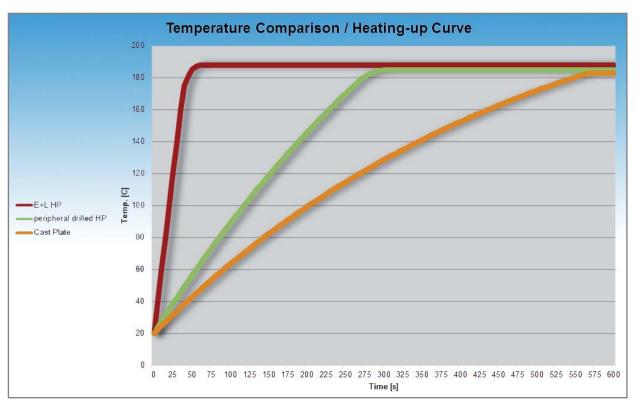


Fig. 2: Heating-up curve of different systems compared.

### **Technical Conception**

The heating plates are designed for the integration into corrugators of 2.2, 2.5 and 2.8m working widths.

The frame construction is independently designed to fit into all marketable double backers various manufacturers.

Thus, the integration in almost all corrugators without any problems is guaranteed.

