



## 98% efficiency for Eckold

**The Eckold company in the Harz region uses Neugart gearboxes in clinching applications.**

As a specialty machine builder, Eckold focuses on joining and forming technology. For electromechanical clinching systems, the company has been relying on Neugart gearbox technology for years.

**Development Manager Florian Unger comments: „With this gearbox manufacturer, the whole package simply fits. The diverse product range offers the right gearbox for every application. We have found the optimum gearbox for us here - compact, powerful, maintenance-free, and at a fair price.“**

### What actually is clinching?

Clinching is a process used to join sheet metal, tubes or profiled parts together. No adhesives or joining parts are used in this process; instead, the metal parts are cold-formed exclusively. This creates a positive connection between the metal parts being joined. In general, our customer Eckold uses pneumatic and electromechanical systems. For the latter, the company cooperates with us.



### Why does Eckold work with Neugart?

If you ask development manager Florian Unger, it's because of our strength in consulting. It's also because of our high product quality and the optimally coordinated product range. To understand how challenging the demands are, you only have to take a closer look at the development and testing process at Eckold ...

### Neugart gearbox put to the test

Before Eckold makes a short list of gearboxes for individual applications, all candidates are subjected to a rigorous testing: In-house, a gearbox must undergo 10 million strokes in a real-life test. If this is successful, the selected units are shipped to OEMs for field testing. There, 2.5 million "test strokes" await them. The

machines are then returned to Eckold, where they are examined thoroughly. Anyone whose gearbox passes this process unconditionally is eligible for use in series production.

## Our solution convinces: with efficiency and better performance data

After all these tests, Eckold decided on a Neugart gearbox. The arguments in our favor were many and varied:

- The Neugart gearbox offers a very high efficiency of around 98%.
- It is around 10 mm shorter and has a lower weight.
- It's performance data is about 5 to 10% higher.

In the clinching machine, this results in two very specific benefits: First of all, the articulated arm robot becomes more controllable due to the weight savings. This shortens process times. Secondly, the already smart unit becomes even more compact. This makes the Eckold clinching machine unique on the market in this field.



After 10 million test strokes, it was clear that the Neugart gearboxes impress with their durability and precision, and that they speed up the process.

## Tailored to the application - we do that

Another factor that was decisive for the engineers at Eckold was that the gearboxes do not need to be relubricated during the life cycle of the machine. This is not quite trivial, considering that the robot arms of the clinching machine are operated in any spatial position. An axial clinching force of up to 100 kN must be achieved. Another benefit that cannot be overlooked: Compared to the gearboxes used previously in the machines, the Neugart gearboxes are a more cost-effective solution.



## The results speak for themselves:

Since the introduction of the Neugart gearboxes, no problems or failures have been reported. On the contrary: Eckold uses our application knowledge to detect irregularities in the overall system at an early stage and takes corrective measures immediately.

This is also made possible by our excellent and free NCP design software.

Every new application at Eckold is in fact designed using the NCP which subsequently serves as part of the technical documentation.

“Due to the excellent application advice, the high product quality and the optimally matched product range, we have been relying on Neugart and its gearboxes for years. In the case of our servo clinching machine, we could not have used a better planetary gearbox.”



B. Eng. (DH) Florian Unger | Head of Development | Eckold GmbH & Co. KG

## A look into the future

### Are other applications conceivable?

Electromechanical drive trains are also replacing hydraulic and pneumohydraulic drives in the field of forming and stamping technology. Eckold supports this development with its latest machine models. Based on the positive experience, Eckold expressly continues to focus on intensifying the cooperation with Neugart. The quality of our products naturally makes us feel proud. At the same time, we put just as much heart and soul into understanding our customers. We are also happy to address their individual needs. Here, too, we consistently represent quality.

## Why not test us?

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