

# Increased efficiency and safety through automation

## A use case from Knauf Ceiling Solutions and ZIMM

### Knauf Ceiling Solutions – Innovative, sustainable and a global leader

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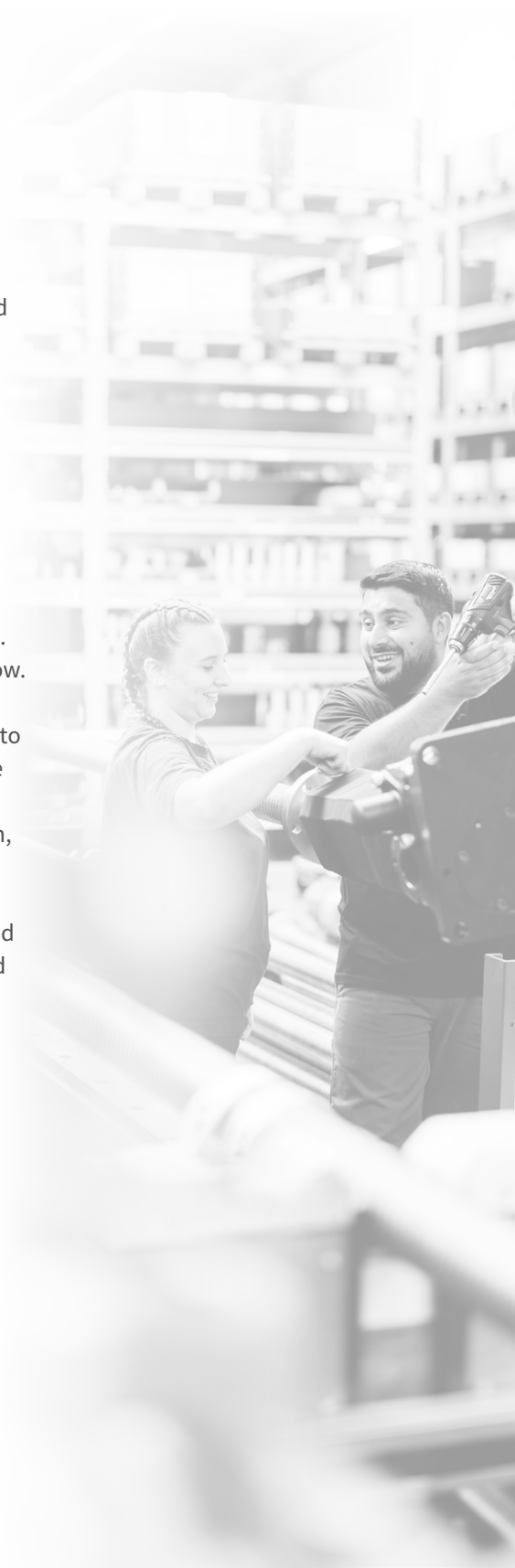
Discover the world of Knauf Ceiling Solutions, a premium ceiling brand that combines creativity, performance and collaboration at the highest level. As an integral part of the Knauf Group, which traces its roots back to the early 1920s, we have grown from humble beginnings in gypsum production by brothers Alfons and Karl Knauf to become an international market leader in building materials.

With the merger of Knauf AMF and Armstrong Ceiling Solutions in 2019, we combine the expertise and tradition of two world-renowned brands under Knauf Ceiling Solutions. Headquartered in Munich, Germany, and supported by a global team of experts, we develop and produce innovative and high-quality ceiling and wall system solutions for various market segments.

Our advantage? No limits! We offer an incredibly versatile portfolio of ceiling, wall and suspension system solutions as well as professional support for your projects. Our mission: to beautify and protect the spaces where you live, work, heal and grow.

Our 1,500 dedicated specialists around the world have the knowledge to respond to local challenges. With a wide range of materials, designs and colors as well as nine state-of-the-art production facilities at six locations in Europe and Asia, we guarantee on-time deliveries through our extensive global network for production, logistics and distribution.

We are particularly proud of our site in Ferndorf, Austria, where we produce around 2 million square meters of wood wool panels every year. These magnesite-bonded HERADESIGN® panels offer outstanding acoustic and ecological properties.



## The challenge

# Modernizing a production line dating back to 1924

A milestone was recently reached: the modernization of the production lines by automating the tensioning of the 34-metre long double steel belt. This not only increases safety and efficiency, but also underlines Knauf Ceiling Solutions' commitment to innovative solutions.

The existing mechanical manual clamping required regular manual adjustments by employees. Given the extreme temperatures of up to 240°C, this task was not only

inefficient, but also posed a significant safety risk.

The solution was to fully automate the belt tensioning - a project that required the utmost precision, as uncontrolled tension regulation could lead to the steel belt breaking.



## The solution

# Automation with ZIMM screw jacks

A high-precision automation system was developed in close cooperation with ZIMM, Europe's leading manufacturer of screw jacks. Two powerful ZE 250 screw jacks, each with a maximum force of 20 tons, were integrated into the system. The gearboxes regulate the belt tension in real time using pressure cells and ensure precise synchronization to keep the steel belt continuously in position. A special feature of

the solution is the control system developed in-house by Knauf Ceiling Solutions, which enables production staff to monitor and adjust the system at any time. This has not only significantly improved safety, but also optimized production output.

# Why ZIMM screw jacks are the best choice

ZIMM is Europe's leading manufacturer of screw jacks and stands for maximum precision, reliability and innovative solutions. With state-of-the-art machinery and extensive measuring and testing facilities, ZIMM guarantees outstanding product quality that proves itself in every application.

ZIMM sets standards in industrial lifting technology and offers industry-specific solutions for automation, logistics, the energy sector and many other applications. With ZIMM, companies not only receive first-class products, but also a partner that impresses with innovative technologies, customized solutions and excellent service.



- 1 Precise load movement from 250kg to 100 tons**  
Ideal for demanding industrial applications.
- 2 Superior efficiency**  
Compared to hydraulic solutions, ZIMM products offer greater economy, no maintenance and a longer service life.
- 3 Flexibility due to different spindle types**  
Choice between trapezoidal or ball screw spindles depending on speed, accuracy and load requirements.
- 4 Maximum durability**  
Thanks to high-precision, hardened and ground high-performance toothing.
- 5 Corrosion protection ex works**  
For use in harsh environments - with additional protection levels and individual color options on request.
- 6 Integrated safety mechanisms**  
Sealed, lifetime-lubricated gearboxes ensure long operating times and minimize the risk of failure.
- 7 Simple integration**  
Thanks to standardized flanges, prepared mounting holes and precisely fitting matching parts.



# Take your production to the next level now – Rely on ZIMM!

The successful implementation at Knauf Ceiling Solutions proves this:  
Targeted automation can significantly increase efficiency, safety and precision in production.

## Rely on ZIMM as a strong partner for your production optimization:

- **Customized solutions** for maximum precision and reliability
- **Maximum operational reliability** thanks to innovative automation
- **Efficient production** thanks to durable and low-maintenance technology
- **Expert advice & support** for customized applications



*“The collaboration with ZIMM was professional, efficient and characterized by excellent communication right from the start. Thanks to the tailor-made solution, we were able to make decisive progress with automation, optimize our production line and at the same time significantly improve the safety of our employees.”*

**Project manager Ing. Michael Pehr | Head of mechanical department  
Knauf Ceiling Solutions**

Let's optimize your production processes together!  
Contact ZIMM now and benefit from our proven  
technology and first-class service!

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