

# NEW AUTOMATIC STORAGE SYSTEM WITH CONNECTED NESTING: POTENTIAL FOR DOUBLING OF PRODUCTION

**Norwegian Stair Builder Hafrsfjord has been using Compass Software to optimize their production for about 30 years. The newest improvement comes in the form of an automatic storage system with an attached nesting machine that saves 15% in materials and can completely finish parts. Owner Arvid Hebnes is excited and expects an immediate increase in production of 40%.**

The stair builder Hafrsfjord Tre A/S was founded in Stavanger, Norway in 1977. The company has been using Compass Software to optimize their stair production since the early 1990s. Back then, the company was still designing stairs in DOS and printing the stair parts on paper to manually cut them out. Hafrsfjord has always been an innovator and so they added their first CNC machine as early as 1999. Soon another followed and they have been working very successfully with 2 machines ever since. Throughout 30 years, Arvid Hebnes, owner of Hafrsfjord Tre A/S, has always been very happy with Compass Software and relied on their cutting-edge technologies to improve his production.



Owner Arvid Hebnes: "I expect to see an increase in stair production from about 650 stairs a year to over 900 per year."



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## Implementation of a New Automatic Warehouse with Nesting Machine

Not too long ago, Arvid Hebnes saw an innovative system at another Norwegian stair builder and knew he wanted to implement a similar system in his own workshop. The idea was to install an automatic crane that would store material automatically as well as load plates onto a nesting machine that would automatically process parts and even finish them completely, if possible.

Today, Hafrsfjord is working with a Compass-Software-controlled crane that automatically stacks plates into 5 piles made of the same size and material.

Once, the CAD drawing of the stairs has been cleared for production, the operator scans a barcode that contains the respective work processes, and the CNC code is generated at that moment with the most current machine information. Compass Software then tells the system what kind of material is needed, and the crane automatically loads a plate of that material onto the conveyor belt. The crane corrects the positioning so that the plate can be transported to the nesting machine. The Holzher Dynestic 7535R nesting machine with 5 axes automatically pulls the plate onto the worktable using vacuum cups. The machine then processes the parts with the plate optimization module and finishes them, if possible, completely. After the milling process is completed, the operator prints a barcode label for each

## CASE STUDY

individual part so that each part can be easily identified at any time by simply scanning it.

Any parts that require post-processing can be transported to their 5-axis Holzher ProMaster 7225 CNC machine and the work processes can be generated via the barcode scanning.

### Up to 50% More Production Potential and 15% Material Savings

Since the system has only been running for about a month, Arvid Hebnes cannot name specific results of the work process change yet: “I expect to see an increase in stair production from about 650 stairs a year to over 900 per year.” Ultimately, he thinks it will be possible to produce 50% more stairs with the same number of employees thanks to the new system. Furthermore, Arvid Hebnes already sees material savings of 10 – 15% due to the nesting machine’s efficiency.

### Less Manual Labor and More Interesting Work

The new system also has several advantages for the Hafrsfjord employees. Before the heavy wood plates had to be lifted and transported manually. This is now done automatically by the crane. Even though the new work process is a big change and requires additional

The machine processes the parts with the plate optimization module and finishes them, if possible, completely.

>> To watch a video of the processing, please click on the image or [follow the link](#).



Each part can be easily identified at any time by simply scanning a barcode label. Additional CNC code for post-processing can also be generated via a barcode scan.



The crane stacks plates into 5 piles made of the same size and material.

training, it also makes the workplace more interesting for the workers and they can develop new skills. Some employees are able to transition to other business areas, such as sales or other places in the workshop, as less manual labor is needed at the machine. All in all, the new work process is a positive and efficient change that makes the workshop more future-proof.

### Future Projects with Compass Software as Strong Partner

“I have always been very satisfied with Compass Software for the last 30 years”, explains Arvid Hebnes. He is excited about the advantages the new system brings to compete in the market. The stair builder will be able to produce more stairs, more quickly, with the same number of employees. “I especially appreciate the personal connections I have made at Compass. I have been able to work with great people in sales and development. I feel 100% supported by the Compass support team and enjoy the personal touch” Arvid adds. For the future, Hafrsfjord is looking at the MES system PROKON. The biggest problem right now: “We need to find more people to assemble all these additional stairs we can produce now!”