

LIPU – more space and time





“Lipu helps us save SEK 300 000 per year in floor space costs alone.

*Hans Karlsson, Production Engineering Office
ABB Transformers, Ludvika, Sweden*

Beginning

Everything began on a September day in 1997 when Seppo Kärkkäinen, the manager of Kesälahti Engineering Works, got frustrated, and not the first time. What had to be found this time was a 10mm steel plate, which was finally spotted underneath the rearmost stack in the warehouse. However, the search operation had required a lot of time and the use of a bridge crane.

Once the plate had been found Mr. Kärkkäinen took a critical look at his crammed warehouse and ended up viewing the ceiling. It was high and had lots of empty space. This sparked an idea that has been refined over years of development work into the Lipu product family.

Lipu effectively combines warehousing with production

Industrial production requires a great deal of space, time and money for the conventional storage of heavy items such as large plates, bars, tubes and pipes. This means that the warehouse is often the first and the worst bottleneck in production.

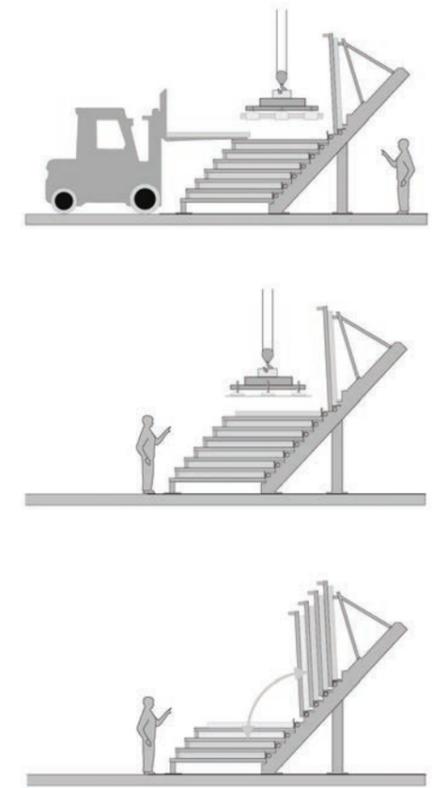
Since 1997 Lipu has dedicated itself to solving these problems. We have developed an entirely new storage system that seamlessly combines the warehouse functions with production, allowing you to save floor space, enhance your business profitability and improve work safety.

We have our head office in Savonlinna, Finland, and distributors in Sweden, Norway, Germany and the Netherlands to serve our Scandinavian, Central European and South European clients.



Lipu is an essential element in our logistic system efficiency. In addition, it helps us keep track of the materials' origin in accordance with our quality system. The equipment speeds up several work phases in our production chain and reduces our labour costs by three man-years.

*Antti Komulainen, Production Manager
Outokumpu Distribution Oy, Jyväskylä, Finland*



Scrolling a single storage seat takes only 35 seconds. Plates are handled safely in the horizontal position.

Closer, faster and more safely

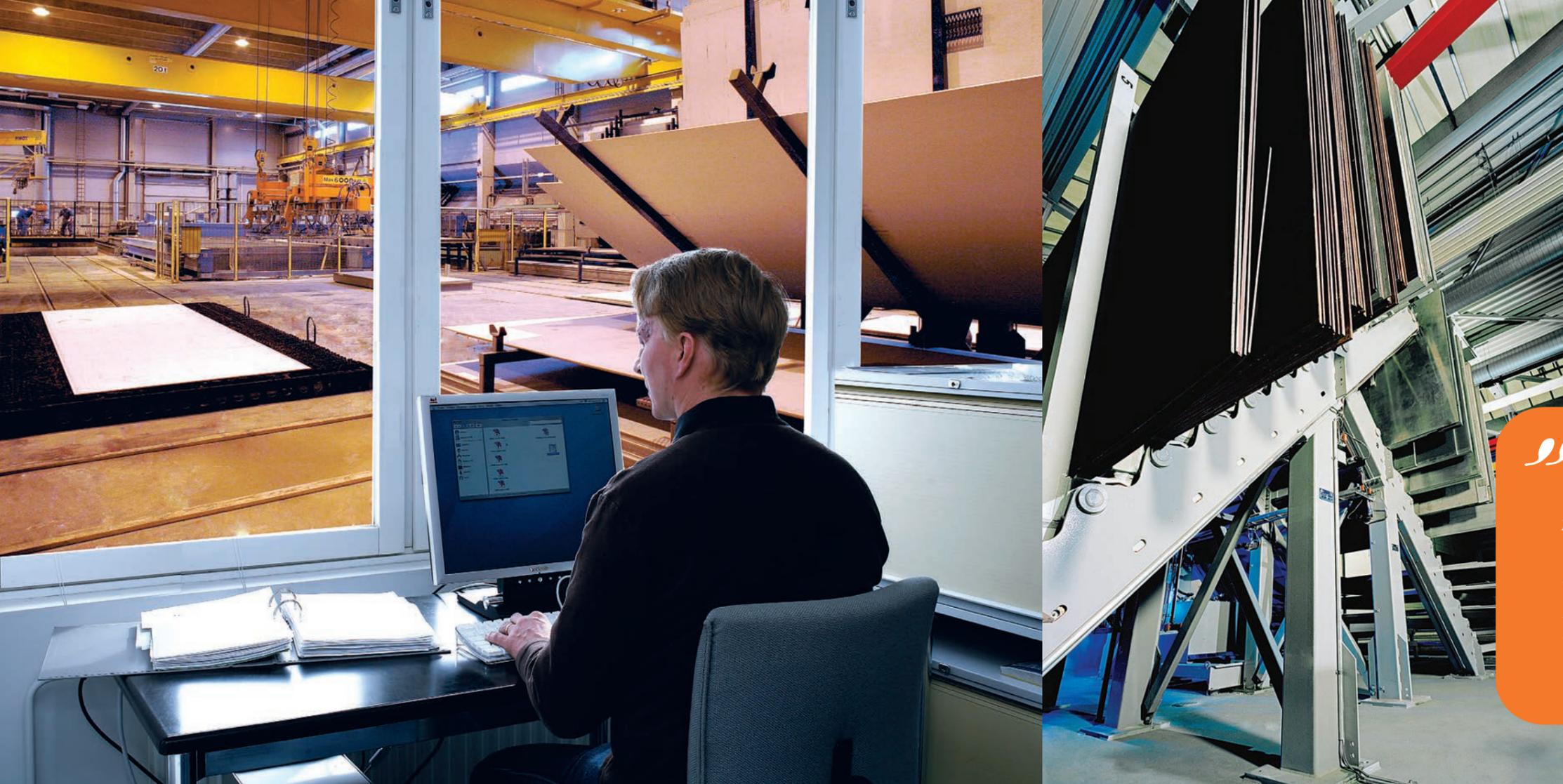
Lipu systems are designed for the storage of large steel, wood and composite plates, including thick plates and sheets. The system is hydraulically operated and consists of a selected number of frames and pivotable storage seats. Lipu stores plates and sheets in the vertical position, and the storage is loaded and unloaded while the selected storage seat is in the horizontal position. This means that each storage seat can be filled and emptied by means of a bridge crane or a forklift from four different directions: from both sides, from the front, and from above. Horizontal handling also significantly improves work safety.

Thanks to the vertical storage solution, Lipu systems reduce the floor space requirement by as much as 80 percent. The minimal space requirement allows plates to be stored in close proximity to the processing station, which eliminates unnecessary transfer, impact damage and waste of time. Thanks to the use of separate storage seats, the correct plate is found immediately and accessed for processing without delay, since the content of a single storage seat can be scrolled in just 35 seconds. This means a significant improvement in production machine utilisation and productivity.

Everything can happen automatically

Lipu systems can be controlled manually or by an automation system. The storage system control may be connected by a cable or wireless contact. Automatic control uses a production program to identify each subsequently required plate. It then opens the correct storage seat, removes the plate and transfers it to the processing station with a crane. The system prepares itself automatically to transfer the next plate during processing.

The automation system may be connected as part of the warehouse information system, which enables real-time monitoring of the warehouse situation. In addition, an automated Lipu system can use remote diagnostics, which speeds up the analysis of even the most exceptional malfunction situations.



“ This is definitely the best storage system for large plates on the market. We have achieved over 90 percent availability for our plasma cutting machine, chiefly thanks to the Lipu system. ”

*Martti Haverinen, Works Manager
Kesla Oyj, Kesälahti, Finland*

The right system for the right place

A central element in all Lipu system projects consists of pinning down the customer’s real needs for storage and production. With this analysis as the basis, we define a system that best serves the purpose in question, either using our standard products or by tailoring an individual solution in accordance with the application requirements.

Automation planning and defining the automation level is also included in our services. In addition to the Lipu system, the automation plan covers interfacing with the production plant’s other automation and information systems, including the control of potential peripheral equipment such as a crane, among others.

Having defined and assembled the Lipu storage systems, they will be delivered, installed and tested on a turnkey basis.

User and maintenance training are essential elements in our services, to ensure the correct and efficient use of Lipu systems, and their long-term operational reliability. Our local distributors provide speedy repair and maintenance of Lipu equipment in exceptional situations. Automated systems can be connected to remote diagnostics to speed up troubleshooting.

Robust but flexible construction

Lipu systems can be dimensioned flexibly to meet a wide variety of production requirements. The size, number and capacity of storage seats is scaled in compliance with the plate size and the amount of plate types used.

Depending on the application, a system may have 7, 8, 10, 12 or 16 pivotable storage seats, plus one fixed seat. The capacity of a single storage seat is 2 500 - 60 000kg. The capacity depends on the number of frames. The storable plates may be 2 - 24m long and 1 - 4m wide. We can also tailor an individual solution in accordance with your specific needs, should your plate size deviate from our standard systems.

Lipu systems are free from complicated and failure-prone structures. This means that our systems are easy to maintain, with their calculated service life being as long as 25 years. Furthermore, the Lipu system structures have a warranty period of five years.

www.lipu.fi



Lipu Oy

Majakkaniemi 30, 57200 Savonlinna, Finland | lipu@lipu.fi | Phone +358 (0)40 558 1278