

Ricoh, France



Ricoh Industrie France manufactures office automation equipment including multifunction printers, toners, recycled cartridges, thermal products and thermal transfer ribbons. Rocla AGVs take care of inner logistics at Ricoh's thermal paper factory in Colmar, Northeastern France. Increased material flow and the need to rationalize operations led the company to seek a comprehensive solution for automating their production.

Ricoh's thermal paper production process is automated with Rocla AGVs and warehouse management system (WMS). Clamp and fork AGVs take care of all material flow: AGVs transport raw material paper reels and pallets from arrival point to the production machines, from machines into the curing room, then into an intermediate stock and finally into loading area. Rocla AGVs also empty the trash containers.

- We had three goals for automation: first we wanted to secure a constant material flow with no stops in the line. Secondly, we wanted to reduce the manufacturing costs. Thirdly, but not the least, we wanted to improve the safety in the factory. We have been able to find a good answer to all these three challenges with Rocla's automation solution, Mr. Stéphane Lamaze, Deputy General Manager of Thermal Business Group, explains.

The AGV system has also brought more space. Now it is possible to store even four paper rolls on top of each other, as earlier it was possible to store only two. The AGV system is also easy to install in an old factory. Ricoh is constantly working to minimize the impact of its activities on this environment. Rocla AGVs are also manufactured taking environmental issues into consideration.

The system has been up and running since 2009. During the years the automation system has been developed according to customer needs. Mr. Lamaze summarizes the good and efficient co-operation:

- The key is that both Ricoh and Rocla had a win-win spirit.



"With Rocla's solution we could secure the constant material flow, reduce manufacturing costs, improve safety for our people and also avoid product damages."

Stéphane Lamaze, Deputy General Manager, Thermal Business Group, Ricoh Industrie France



V-TAB, Sweden



V-TAB, the largest newspaper printing group in Scandinavia, has built a major printing plant in Landvetter, Sweden. It has not only automated much of the actual management process at the plant but also automated the way in which newsprint paper reels are supplied to the printing presses. The new plant uses Rocla's automated guided vehicles, as they save on time and costs and handle the reels carefully.

The main reasons the company has decided to replace the manual trucks used at the old plant are the high reliability of AGV technology – AGVs do not call in sick or have bad days – and its precision, which eliminates the risk of damage to the 1.5-tonne newsprint paper reels. These reels are prone to suffer damage to their edges if they land awkwardly on the concrete floor, deform to an oval shape if the clamping force is too strong, or slide around within their outer packaging if the clamping force is too weak.

When the reels are ordered from the main warehouse, forklift trucks with clamp attachments transfer them to a preparation station, where the reels are centrally prepared for printing. The reels that are ready for printing are then read in the central WMS, warehouse management system, also supplied by Rocla, for intermediate storage; the fetch order is then given to AGVs to transfer them to the intermediate warehouse for pre-prepared reels.

“It is during the day that most of the intermediate warehouse is filled up, as this is when production is limited to the commercial production of advertising flyers,” explains Mr Hans-Åke Stjernman, System Engineer at V-TAB. “At night, AGVs take the paper reels to the printing presses – and this process needs to be quick!” he says.

V-TAB prints four kinds of newspapers, with different colours (pink to white) and with different grammages, which makes warehouse management more complicated. In the change-over from printing one newspaper title to the next, the paper reels that have not been used are removed from the presses and are returned to the buffer warehouse by AGVs.

“The time-critical part of production is during the change-over between newspaper titles. This is why we have set up a buffer warehouse close to the presses, to decrease the time that AGVs take to discard reels that have been used and to pick up the new ones,” explains Mr Stjernman. “This saves us valuable time in production. Having a little extra capacity in our intermediate warehouse saves us even more time,” he adds.

“Other advantages of AGV technology include its precision and the careful way the reels are handled. This enables us to prepare them into reels that are ready for printing before they arrive at the printing press itself,” continues Mr Stjernman. “It is easier to handle and take care of the transport packaging after it has been removed, since we concentrate all of this work at one central preparation station rather than doing this right before we feed the reels into each printing press. We also make better use of the full paper content of the reels, because we avoid damage caused by manual truck handling.”

Enormous volumes of newsprint paper pass through the printing plant, so AGV technology saves huge amounts of money, since it ensures that the reels are handled carefully. This benefit arises because optimal use is made of the reels: they do not have to be thrown away on account of clamping damage, and the printers do not lose thousands of running metres through damage to the edges.

“AGV technology saves us huge amounts of money, since it ensures that the reels are handled carefully and precisely. In our time-critical phase of production we are also saving time thanks to AGV system.”

Hans-Åke Stjernman,
System Engineer, V-TAB

