



KARDEX

# BEST PRACTICE

## Behind the firing line

**Defence electronics specialist Alenia Marconi achieves 66% floor space saving and increased protection for its delicate stock**

*Alenia Marconi Systems originally began using Kardex carousels as a means of saving space. But over the years many other benefits became equally important to their stores operation in the high-tech world of defence electronics.*



Iain Whyte, Stores Controller

Alenia Marconi Systems (AMS) has been using Kardex's Industrier vertical carousels for many years and still has some in operation that were installed 26 years ago. Iain Whyte, Stores Controller, at their high security plant in Dunfermline, Scotland explains what lay behind their original decision to invest in carousel technology.

"Our components are very small so carousels are ideally suited for us. We manufacture up to 100

different products at any one time in the factory with 17,500 components held in our stores. We supply sophisticated electronics for aircraft radar, torpedoes, missiles, rockets and a whole range of other products.

**"However, even though we use them for small parts they are versatile machines – one of factories has even used Industriers to store finished torpedoes."**

AMS is a world leader in hi-tech, durable electronics

parts such as printed circuit boards which are used in all kinds of military communications, radar and weapons systems. Their customers include BAE underwater weapons division with parts for surface launched Stingray torpedoes and also the new heavy weight Spearfish torpedo. Recent high profile projects they have been working on include the Eurofighter and U.S. Apache helicopter.

One of the key reasons they first moved towards

carousels was the significant space savings that could be achieved. **"With vertical storage you don't need the same footprint of storage space. We are limited to 3 metre machines because of our roof height. However, even at that height our new machines have 48 shelves, and we get 13 bins to each shelf"**.

"We can fit 5500 batches of material into one Industrier. It is an awful lot less space than would be needed on traditional racking."



■ SAVING SPACE

■ FASTER PICKING

■ STOCK PROTECTION

# Turning non-productive areas into profit

The space savings at AMS have been quite dramatic as Iain calculates "I have been able to reduce my stores floor space by two thirds. Even though we have less storage space our capacity has still increased by a further 20%."

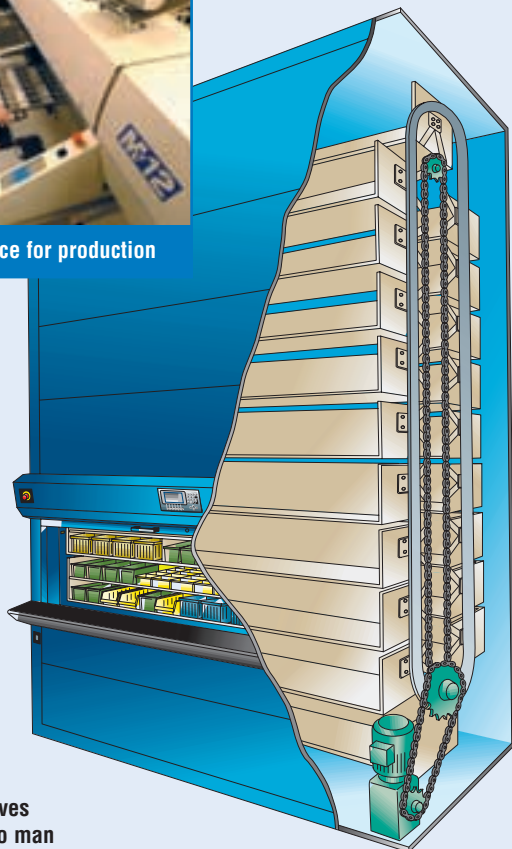
The space saved was turned into a production area for high value printed circuit boards. "The stores are not of any value to the

company as they are not making anything. I have been able to give a third of my space over to production. Instead of a dead area it is now an active area which is adding to the profits of the factory."

The cost justification for investing in Kardex machines was therefore quite simple. "The cost of an Industriever is the equivalent of just two printed circuit boards. This is insignificant compared to the benefits and increased production we were able to obtain. We were easily able to get a payback within months.



More space for production



Rotating shelves bring goods to man

# High degree of security and stock protection

However, saving space is only one benefit to using carousels. They also provide greater security and stock protection. This is very important to AMS whose site is covered under the Official Secrets Act. The small parts used are also very delicate and can easily be damaged. The Industriever plays an important role in protecting and organising the stock.

"The Industriever is dust free and lockable. We have sensitive and classified material that has to be kept under lock and key. We also have material that, because of costs, needs to be locked up as well. I have integrated circuits that cost £1800 each - we can't afford to lose any of them."



## Stock accuracy is vital

It is not always a matter of cost, Iain finds stock accuracy is vital for good customer service. "Sometimes the suppliers lead time is very long. If we don't have accurate stock levels we may find that we do not have a certain component to build the last unit on the shop floor. We cannot afford to say to our customers 'Sorry that unit you were

expecting won't be ready for another 16 weeks.'

AMS therefore operates a perpetual inventory count. The programme is run by computer software that gives the operators daily counts. "The Industriever makes this much easier. If anything has been misplaced you know it can be easily found."

# Increased picking speeds

"Picking is quicker as there is a lot less walking time which, to a stores person, is dead time. Our computer gives us picking tickets in location order and that runs alphanumerically. This greatly increases speed and efficiency"

"Nowadays when we are picking a kit, 80% of the components are from the carousels which makes it very efficient as they are all in the same area. There is much less travel. And because of the better working environment, picks are generally more accurate."

"The previous stores was open racking. The

stores were open up to the factory roof making it dusty, droughty, and dark. It was also cold in winter and hot in summer. These unpleasant conditions affected workers performance.

The Industriever completely transformed the stores environment. The carousels are all located together in one area, which is brightly, lit and air-conditioned.

"The comfortable working conditions have improved productivity and accuracy. The Industriever has improved team spirit, made it easier for people to do their jobs

and they therefore make less mistakes."

The enclosed nature of the Industriever vertical carousels also helps with stock protection.

"The dust free environment is a big

bonus." Says Iain

"People often fail to appreciate the difference in a part which has been kept in an Industriever for a few years compared to open racking."



The old racking stores were difficult to access

## Better ergonomics

The improved ergonomics of the carousels have also improved working

conditions and health and safety. The pickers no longer have to go up and down racks with trolleys.

The automated carousels bring the components to them at waist height for easy selection.

AMS takes health and

safety very seriously. The carousels have a light beam, which if broken automatically stops the shelves from rotating. "The safety systems on the Industriever have been extensively tested by our own health and safety experts on site. We have tried to cause injuries to ourselves to ensure that all the safety features work – and they do. We have very high health and safety standards and can't afford to put any of our employees at risk."



# Nitrogen purged carousel

AMS recently commissioned a special nitrogen purged carousel to help protect vulnerable surface mounted components. Nitrogen prevents the oxidation of the components and thereby prolongs their life and quality in storage.

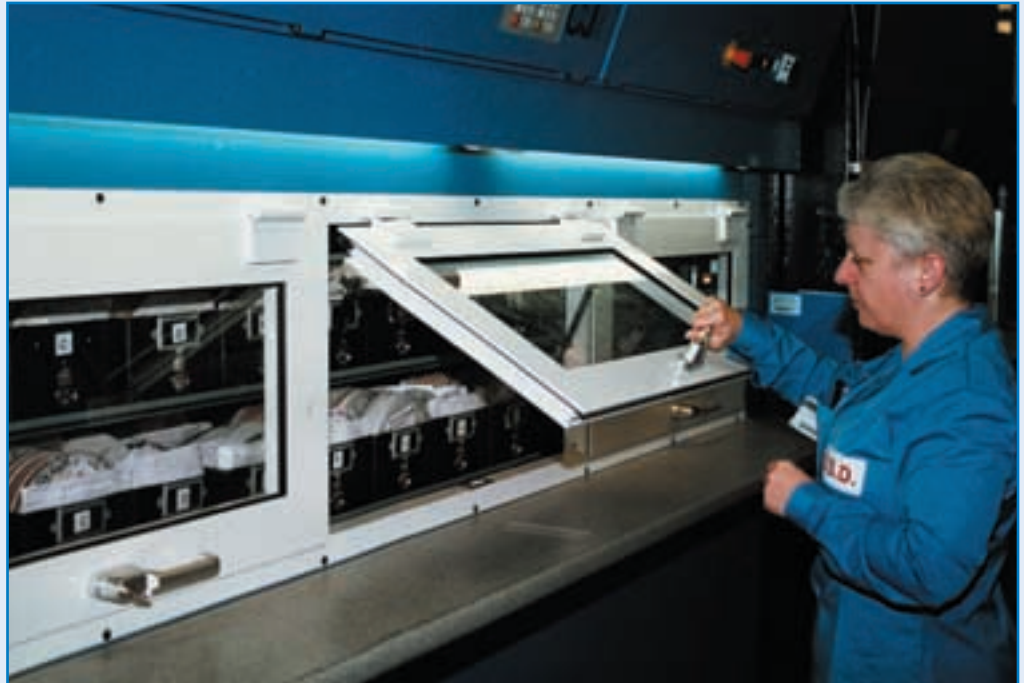
"Kardex's design people went away to develop the nitrogen carousel especially for us. It has been tested

by our chemists in the lab to ensure that it's efficient and leak free."

"Our products are safety critical. They are

used in fighter jets, thousands of feet above the ground in battle conditions and are subject to tremendous G-force.

We can't afford any of our joints to crack or components to fail. It doesn't bare thinking about."



Atmospherically sealed for stock protection

# First class customer service



Kardex's commitment to high standards of customer service has also been important in their successful 26 year partnership with AMS. "The Industrieviers are very reliable. Some of our machines are 26 years old and still going strong. We hardly ever have any problems and if we do an engineer is usually here the same day."

Iain Whyte concludes "We have recommended Kardex to other companies within our group. In our business Industrieviers are definitely the way to store."