



Vertical Carousel System Maximizes Floor Space

Features and Benefits

Production setup time reduced from 4 hours to 20 minutes.

Frequent inventory changes require storage adjustability.

300 square feet of inventory now stored in just 67 square ft.

New facility construction avoided.

Industry Group: Automated Storage/Retrieval Systems (ASRS)



An industry leader in portable gas detection and a major manufacturer of fixed point gas detection systems was growing at a phenomenal rate of 20 to 30% a year. According to the SMT Coordinator, the company was using mobile carts to supply parts to the production area. At its rate of growth, manufacturing would have soon required a new building if something was not done. This presented a difficult challenge for the production department, which was eased, in part, by increased storage capacity and organization.

Meetings with several suppliers were arranged to:

- consider expanding its existing system of mobile carts
- analyze high bay storage
- analyze various automated systems such as
- carousels and AS/RS

The company decided that automation provided the most benefits. They arranged a supplier meeting to conduct a pilot study using one vertical carousel. Company personnel considered space, inventory and productivity.

The SMT Coordinator and his crew discovered that

nearly 300 square feet of floor space that had been consumed by mobile carts, was reduced by the vertical carousel system to just 67 square feet. An intelligent microprocessor was included and handled inventory control effectively. To top it all off, the carousel produced a payback in less than a year. Based on these results, the company decided to immediately add another unit to manufacturing and three additional units within a few months.

The company uses a two-carousel system in a very effective way. The No.1 machine offers free and ready access of parts to all workers and supports day-to-day manufacturing. The No. 2 machine is equipped with inventory control software to monitor inventory. It counts numbers of parts in and out and supports day to-day inventory control.

When manufacturing sensitive electronic devices at a zero tolerance for defects, test fixtures become very important items. The company stores between 60 and 70 test fixtures in this carousel. The vertical carousel system provides easy access and a clean, limited dust environment for the instruments.

The fourth machine supports the work cell for manufacturing the stationary, non-portable gas detector products. And the fifth carousel is in the post assembly area, housing kitted parts and providing general storage. As of this writing, 11 individual vertical units are now in operation at this manufacturing facility.



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