



Case study

Automatic Storage and Retrieval

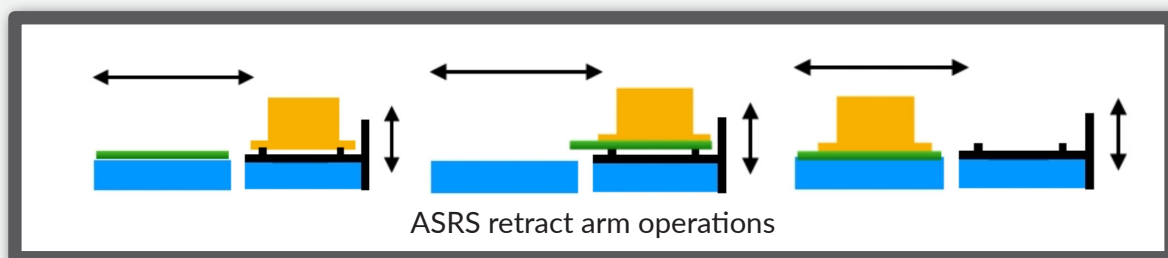
VERTICAL CAROUSEL ASRS

BRAKES | FOOD | PHARMA | FOUNDRY INDUSTRY

How do you automate a process that involves 100-500 unique bins that have to be fetched from storage, used and returned back to storage?

Autosys has designed and executed an innovative bin handling system that can fetch from and return to 100s of storage locations on a vertical rack divided into columns and rows. The speed of the ASRS can be customized to meet the specific application.

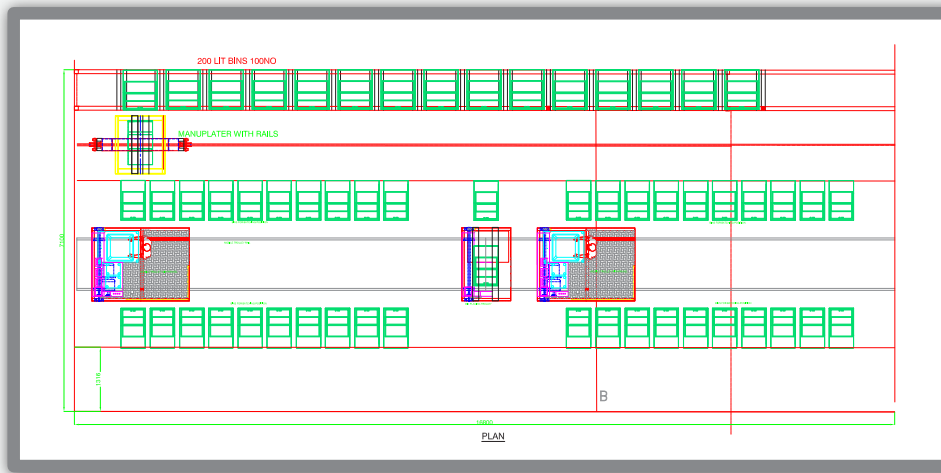
With multi-disciplinary expertise in Material Handling, Mechanical, Electrical, Electronics, PLCs, Barcode/RFIDs, Networking and Software, Autosys takes care of design, supply, installation, commissioning and maintenance of the entire system on turnkey basis.



TURNKEY SOLUTION



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The system uses Servo Drives, Advanced Laser Sensors and Industrial Wireless Communication to orchestrate the movement of bins seamlessly. To ensure traceability and poke-yoke, a combination of bar code readers and RFID scanners are used.

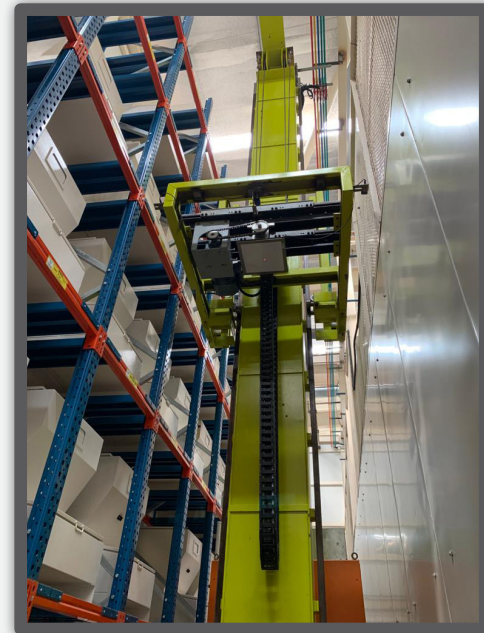
APPLICATIONS of VC-ASRS

Let us look at some of the applications where a Vertical ASRS will be of immense use:

Batching

Like in Brake linings, Food and Pharma, multiple ingredients have to be weighed and batched as per a recipe. Even the addition of each raw material to a common hopper should be done in a specified sequence.

A typical production schedule / product-run, may require 16-18 raw materials, which are in turn chosen from 100s of possible raw materials that are available in stores.



A Vertical Carousel based system stores all the required raw materials in individual bins in their designated locations. The set of raw materials required for a particular schedule will first be moved from their storage location to the batching location and arranged in their proper sequence as per the recipe.

Another Batching Trolley will automatically go to each bin, and the required weight of that material will be fed into a weigh hopper and the sequence repeats for all the materials in the recipe. The batched quantity is then automatically transported to the mixer and discharged.

Tools and Molds

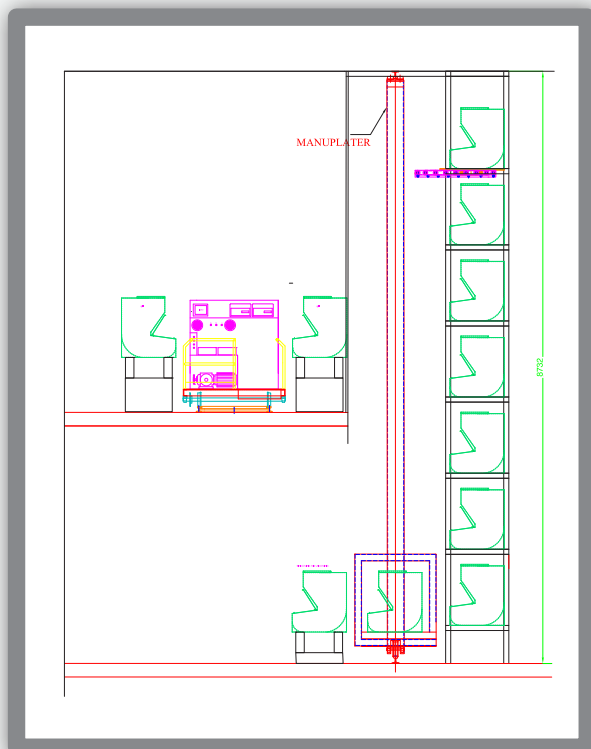
Tools and Molds used in various industries like Machine Tools, Press, Foundries etc., have the same problem of a wide variety. These have to be stored safely, fetched when required and returned to storage after use. A Vertical Carousel based ASRS is ideal for such requirements as it saves time, eliminates mistakes and ensures automatic traceability.

The upstream and downstream process of the VC-ASRS can be customized for each application.

When the production schedule is changed, the materials required for the next product are rearranged. The unwanted bins are returned to the VC-ASRS and the required bins are fetched.

The VC-ASRS also provides a separate filling and pick-up station for refilling the raw material into the respective bins. The bags issued by stores are scanned (using bar code scanner) and the corresponding bins are brought to the filling location. After the bins are filled, they are taken back to the storage location.

Autosys designs and guarantees the throughput of the system in terms of batches per hour.





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