

Automated Storage & Sustainability

Although the term “carbon footprint” has been added to the latest edition of Merriam-Webster’s dictionary, few users of automated storage and retrieval systems (AS/RS) have added it to their corporate dictionary. As a result, most companies still focus on traditional justification measures, overlooking the value of a facility’s carbon footprint.

Whether you’re talking about a multi-aisle AS/RS, a horizontal or vertical carousel or a vertical lift module (VLM), these systems, by their very nature, minimize the size of a facility’s overall footprint as well as its carbon footprint.

To begin, automated storage makes better use of vertical space in facilities. That allows storage of the same number of units in a smaller footprint that requires less concrete, reducing carbon dioxide emissions.

But it doesn’t stop there. “The ability of automated storage systems to store inventory more densely eliminates the need for energy to heat, cool, light and ventilate excess square footage,” says Hanel Storage Systems’ Brian Cohen, chairman of MHIA’s AS/RS Industry Group.

In food storage applications, automated storage systems reduce the square footage that needs to be refrigerated. Taller storage systems save up to 30% in cooling costs for refrigerated warehouses.

Consider one ice cream manufacturer in Alabama. Its nine-level high AS/RS stores 7,000 pallet loads in just 14,000 square feet. At -30F, energy costs per square foot are extremely high, maximizing the energy saving of the automated storage system.

Automated warehouses also require less lighting, which further reduces energy consumption. And in closedloop environments, reusable plastic totes and pallets in automated storage systems help reduce the amount of transport packaging that wind up in landfills.

There’s the case of a North Carolina service parts operation that uses two VLMs. Compared to its previous storage system, the company trimmed the square footage needed to store parts by 87%. Elsewhere, a vertical carousel trimmed a company’s storage footprint from 300 square feet to 67. Both companies benefit from a range of energy savings and reusable containers.

These and other green success stories using automated storage can be found at www.mhia.org/industrygroups/as-rs/members [1]. In addition, members of the AS/RS industry group offer resources from energy calculators for automated storage equipment to white papers on being green on which can be found by clicking on individual company names.

Supply chain leaders are also starting to ask their suppliers and potential suppliers to start gauging their carbon footprint. That means not only producing products that are more energy efficient, but making sure processes used in that effort are more carbon friendly as well.

For example, Walmart is using “material efficiency” as one of its criteria in that measurement. This retail leader wants its suppliers to reduce solid waste and

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wasted energy. And Wal-Mart says it will require companies to place “carbon labels” on their products.

And as has been suggested in the business-to-business press, this effort is likely to have an impact on how companies store their goods and inventory. Once again, automated storage will be at the forefront of minimizing energy consumption, reducing carbon footprints and making the overall supply chain just that much more green. Automated Storage/Retrieval Systems (ASRS) Industry Group members are the Industry’s leading suppliers of automated storage/retrieval systems. They supply systems worldwide and in virtually every major manufacturing and distribution sector.

For more information on automated storage, visit www.mhia.org/as-rs [2]. To view the current members of the AS/RS Industry Group, visit www.mhia.org/industrygroups/as-rs/members [1].

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Links:

[1] <http://www.mhia.org/industrygroups/as-rs/members>

[2] <http://www.mhia.org/as-rs>