



Project Profile

- **Company:**
Raynor Garage Doors
- **Industry:**
Building Materials
- **Project Location:**
Dixon, IL – Plants 4 and 6
- **Ross Products:**
DexcoTM Heavy Duty Coil Racks and Wide Span Racks
- **Application:**
Painted Aluminum Coils and Steel Headplates

Challenges:

Optimize Plant Safety and Improve Storage Efficiency

In keeping with their roots as a self-made company, Raynor often fabricates their own equipment, manufacturing fixtures, and even storage racks. As part of their commitment to continuous improvement, the company recently conducted a safety and efficiency study on racking used to store raw materials for their rolling steel commercial doors and Aspen Series residential doors. Study findings revealed that advancements were possible in the following areas:

- **Utilization of Floor Space:** Racks designated to store heavy steel headplates were not capable of handling all required inventory, therefore, product was being stored on the floor. In order to maximize the use of limited manufacturing space, Raynor decided to research the availability of engineered racking systems rated for heavier loads.
- **Material Handling Efficiency:** In addition, the headplate racks were very deep, which made handling product at the rear of the shelves time consuming and difficult for forklift operators.
- **Safety:** Damage to storage racks caused by material handling equipment is a reality that all manufacturers are faced with. After having an outside engineer assess their coil racks, Raynor concluded that a system fabricated with structural components would better withstand damage and improve plant safety.
- **Vertical Storage Capabilities:** Raynor's existing coil rack system provided for only two tiers of storage. As such, space was limited for their inventory of painted aluminum coils, which weigh as much 8,000 lbs. each. Outside engineers suggested that a heavier duty rack design could accommodate three vertical storage positions.

Solution:

Dexco Heavy Duty Coil Racks and Wide Span Racks

While the possibility of increasing vertical storage space intrigued Raynor's management team, they also wanted to ensure that safety would not be compromised. Ary Leckey, the company's Distribution Manager, began to search for potential solutions on the internet and discovered Dexco[™] Racks, manufactured by Ross. After demonstrating Ross's ability to design structural racking systems for loading conditions that far exceeded their own application, management gave Ary the green light to initiate discussions.

- **Site Visit:** Tracy Buck, Dexco[™] Sales Engineer, visited Raynor to assess the site understand the company's operational objectives and develop potential solutions. He also shared other projects Ross had completed to reinforce the company's engineering capabilities.
- **Dexco[™] Wide Span Racks:** Ross designed wide span racks for Raynor to store their headplates as well as other raw materials used in Plant 4. Each bay consisted of four shelves capable of storing 14,000 lbs. and measuring 21' wide by 50" deep.
- **Dexco[™] Coil Racks:** To minimize cost, Ross custom engineered coil racks with side-by-side storage positions within each bay, thus eliminating the number of vertical uprights required by 33%. Each bay included three vertical shelves with a maximum coil capacity of 8,000 lbs. per cradle and 16,000 lbs. per shelf. Custom cradles were fabricated to accommodate coils of varying widths.
- **Installation:** Raynor employees assembled the racks in March 2019.

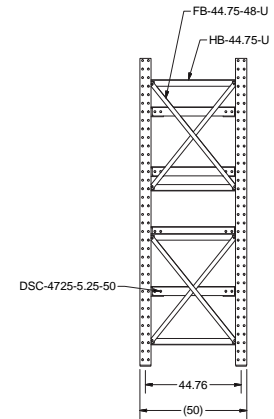
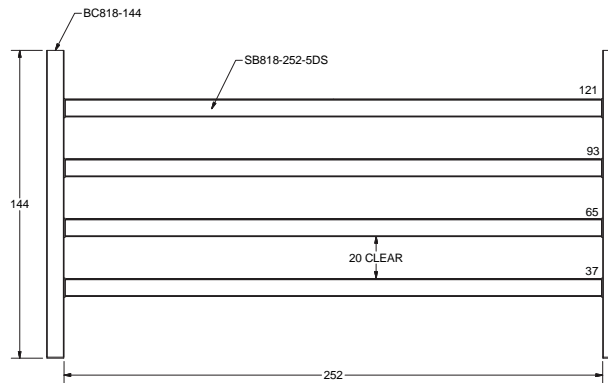
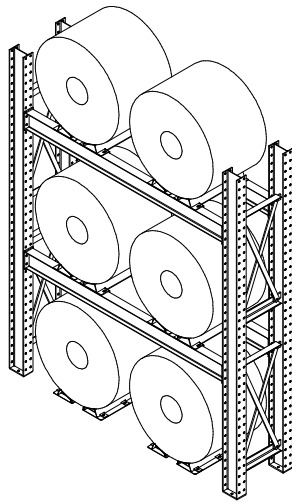


Results:

Custom Industrial Storage Racks Facilitate Continuous Improvement Objectives

- **Top Shelf Storage:** Wide span shelving has given Raynor greater flexibility for storing many different shapes and sizes of raw materials. In addition, because Ross designed the new racks to handle more weight, the company can now store heavy objects on the top shelf to free up floor space.
- **More Coils, More Colors:** With three tiers, Raynor now has the capacity to store a wider assortment of painted coils, which helps them inventory for an ever-growing list of color options. The company has built a reputation for offering customers a wide selection of colors; extra storage space helps them keep up with demand more efficiently.

- **Value-Added Safety:** Fewer vertical uprights means that DexcoTM Wide Span Racks allow forklift operators to access material with less interference. Additionally, fewer uprights also eliminates the need for deep shelves, resulting in safer loading and unloading conditions.



Why Ross:

Raynor Garage Doors' primary objective in sourcing a rack manufacturer was to find a company that had a significant amount of experience in engineering and manufacturing systems for heavy-duty industrial storage applications. Ary Leckey chose DexcoTM racks because:

- Ross has a strong history of engineering structural racking for heavy steel parts and aluminum coils.
- The company designs their racks using American Institute of Steel Construction (AISC) standards for steel buildings and bridges.
- Ross has a long history in manufacturing physical security products that protect US Embassies, military bases and critical infrastructure. Ary states, "If Ross products are strong enough to protect our country, then they are strong enough for Raynor."

About Raynor: Since 1944, Raynor Garage Doors has been an industry leader as a family-owned garage door manufacturing company located in Dixon, IL. With over 800 distributors in the United States, 190 in Canada, and 60 distributors in 50 countries on 5 continents, Raynor manufactures a full line of residential garage doors and commercial doors, industrial, agricultural, and loading dock doors.

About Ross: Ross manufactures a diverse line of public safety and physical security solutions designed to protect people, property and products in a wide range of applications including heavy-duty industrial storage, anti-terrorism / force protection, and infrastructure access. Based in Leola, Pennsylvania since 1962, the company supports ground-up construction and capital improvement projects throughout the world. Ross specializes in creating products that are engineered and tested to meet the highest standards for safety, quality and reliability within their respective fields.



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