

CASE STUDY

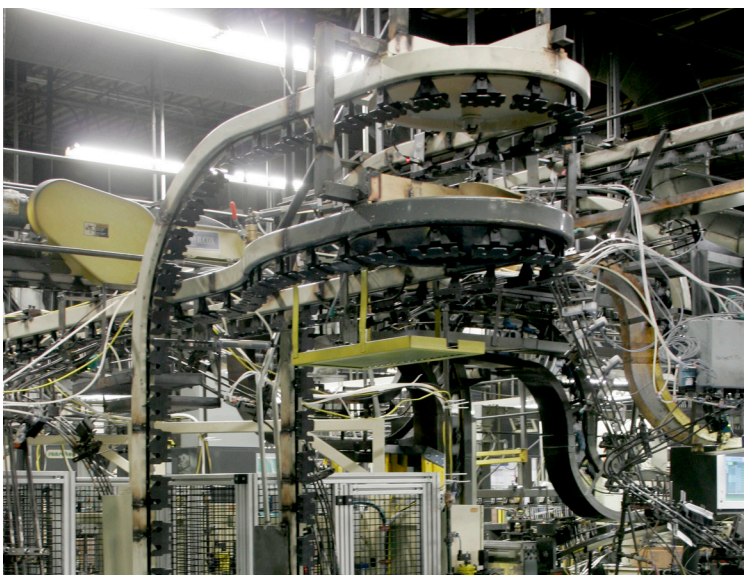
Eaton Corporation
Kearney, Nebraska
Industry: Manufacturing, Automotive

Richards-Wilcox Conveyor System
Interfaces with Extreme Manufacturing

- Saved labor hours
- Radically reduced changeover times
- Maximized efficiency



Richards-Wilcox conveyor track makes extreme turns to integrate with multiple operations.



Never knew what an overhead conveyor could do?

This major supplier to the automotive market pushes the envelope with conveyor design. Read how the Richards-Wilcox Conveyor System loads parts and interfaces with as many as 16 different manufacturing operations.

THE STORY

Eaton Corporation produces more than a million engine valves per day for nearly every automaker and engine manufacturer in the world. The facility in Kearney, Nebraska, is the most productive of its worldwide operations, supplying highly engineered valves that increase fuel economy, improve efficiency, and boost performance.

At the heart of the manufacturing operation is a Richards-Wilcox Monorail Overhead Conveyor system configured in one of the most unique ways ever seen. Multiple conveyor lines feature over 2000 feet of track and chain in a single line, with an estimated 12,000 feet of track used for the entire system of 6 lines. With the exception of summer and winter maintenance periods, Eaton runs its JIT production 24/7.



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THE PROCESS

After being extruded from steel slugs, the valves are put into a bin at the start of the conveyor where they are taken up by carriers for a variety of automated processes. This will be the last time in the process where the valves are actually touched by workers until the packed and skidded parts are moved for distribution. Washing, forming, grinding, and sanding, as many as 16 different operations, are conducted on the line that integrates the Richards-Wilcox Conveyor with other machinery used in the process.

The complexity of this conveyor system lies in the number of separate operations that are incorporated seamlessly and the sheer number of curves and loops the Richards-Wilcox conveyor track makes in a very limited amount of space.

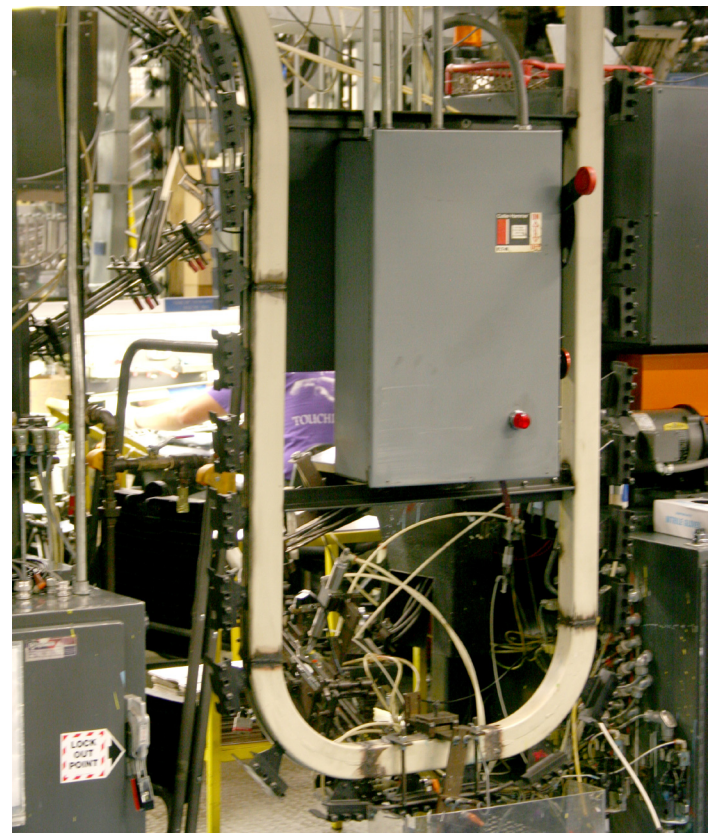
THE SOLUTION

Eaton Manager, Joe Bash, oversees line layout and production. In order to make the most efficient use of floor space he's experimented and implemented design techniques that push the envelope. A single section of 10 foot track may be cut multiple times as necessary to create an offset to wind around a machine. Bash commented he appreciates that Richards-Wilcox track does not flare when cut like lighter gauge roll-formed track; this allows him to fabricate even a 9" radius track curve with no problem.

Eaton's former material handling system was manual with operators loading batch lines. With the shift to propriety software and the Richards-

Wilcox Conveyor System, 1 operator now tends 6 machines, saving a remarkable number of labor hours. Changeover times have been reduced radically from 8 hours to 15 minutes – 1.5 hours maximum. Split lines allow for lower runs at maximum efficiency, but still provide JIT manufacturing.

Joe Bash, 'Richards-Wilcox product is flexible and quality is excellent. If management asked me to create this system 20 years ago, it would never have been possible. These cost benefits opened up a whole new world. Now everything doesn't have to be in a straight line.'



Richards-Wilcox track does not flare when cut, so even tight 9" radius curves are no problem.



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