



Solving Materials Handling Issues Begins at Home

Features and Benefits

Increased Production

Less Wasted Motion

Better Ergonomics

Industry Group: Ergonomic Assist Systems and Equipment (EASE)



When a busy plant in southern Arkansas hired a new manufacturing coach the production rate, as measured daily in person-hours per foot of conveyor section assembled, was averaging .250 or slightly higher. His job, he was told, was to "hold the line" at .250. To sustain that success, they had to maximize the efficiency of its own company, as well as its customers' operations.

The Problem:

Early on, he noticed bottlenecks at the first assembly stations on two production lines. Here, standing at tables, employees bolt small brackets to steel bars called roller angles. Farther down the line, where the conveyor sections begin to take shape, he sometimes saw other workers with nothing to do as they waited for more roller-angle assemblies, before they could add other parts.

The new manufacturing coach, also grew concerned about back strain. Although brackets were on the tables within reach, the much heavier roller angles were kept on the floor, in large metal bins that had been left several steps away by a forklift that could get no closer. Repeatedly, employees would each walk to a bin and bend over to scoop up as many of

the bars as he or she could carry back to the table. As the level of parts in the bin dropped, employees would have to bend lower.

The Solution:

A portable container tilter provides easy access to parts in wire baskets or other large containers with fork clearance. The unit is wheeled right up to the worktable. The operator uses a pushbutton-wired remote to activate the tilter's powerful hydraulic system, which tilts the container to the most convenient angle (up to 85°) so parts are kept at least waist high -- accessible without bending or stretching. With a 4,000 lb capacity, the tilter's overall width is 34 in., overall length is 58 in., and mast height is 31 in.

Because the tilters dramatically reduce walking and bending at the critical starting points of the two production lines, the entire assembly process was speeded up. As a result, the added efficiency exceeded management's expectations. In the months since the tilters were added, the previous average of .250 has improved to about .235 person-hours per conveyor foot assembled. That may sound at first like a small difference, but it adds up to big savings. With both production lines running for 8 hours, 40 employees working at the new rate can assemble approximately 100 additional feet -- an average retail value of \$5,000 more per shift. "We don't have people complaining about their backs anymore," says line worker. "And since we don't have to bend over and lift them up, we can scoop out more bars than we could before. Sometimes I take an armload, like with firewood."

Even a company that specializes in materials handling found a way to improve its own materials handling. After all, it had a reputation to uphold.

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