

# Conveyor Case Study



## Floating Conveyor Project

Wine Cellar Innovations (WCI) is located in the historic Linwood neighborhood of Cincinnati, OH and occupy what was the LeBlond Aircraft Engine Corporation's factory. WCI focuses on building custom wine racks for commercial and high end residential wine cellars, from scratch. Just because each unit is hand built, doesn't mean that they don't use automation and efficient systems to build their product.

Most wine racks are built with short sticks of wood. In order to turn large stock into small pieces, several cuts have to be made. After each cut the wood needs to be inspected for imperfections and damage. Between a length cut operation and a planar, the parts had been queued in bins and moved from one machine to the next. The operator would load the planar and reject the bad parts. This created excess WIP inventory, excessive bending, and potential for backup between operations. WCI called on Conveyer & Caster to help them solve this problem.



WCI has quite the engineering team. They have to work around an old building with low ceilings and big columns spaced quite close together; so creative solutions are right up their alley. WCI was looking for a way to send the cut stock from the first machine to an inspection station which would feed the planar. They wanted enough time for an operator to inspect all four sides of the wood and reject or approve the piece. The parts need to be spaced and separated and the operator needs enough time to inspect.

The solution sounds silly when you hear it the first time, but we needed two conveyors. One on top of the other. The top conveyor, provided by QC Industries, moves at a higher speed moving the parts away from the chute and depositing them on the lower, larger conveyor. The top conveyor floats on the bottom conveyor using 4 swivel double wheel casters made by MedCaster. The bottom conveyor, a Roach conveyor, moves at a speed about half that of the top conveyor. This prevents clogging at the outfeed and provides reasonable separation between the items. An inspector/operator works the length of the larger conveyor, moving rejected pieces to the opposite side and keeping good stock on the near side. The good stock is fed into the planar.



We like challenging problems; they are a lot of fun to solve! If you have a handling problem that's making you scratch your head, get in touch with us today. You can contact your account manager or call us at 800.836.0630.

### Conveyer & Caster - Equipment for Industry

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