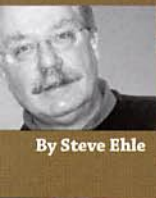




PRODUCT
DEVELOPMENT



Two SCM Concept 1000 single-end tenoners are workhorses at Corona Millworks.

Innovation and product diversification fuels Corona Millworks continuing growth

Component manufacturer continues to flourish in Southern California's softening market.

Wood Digest first visited Corona Millworks about three years ago. We reported in the November 2005 issue on Corona when the company first moved into its 45,000-sq.-ft. building. At that time, Corona made solid wood doors only and was just introducing RTF doors and drawer boxes. Corona was experiencing meteoric growth then. With the current economic conditions, *Wood Digest* revisited Corona to get an update.

Yes, there are silver linings in this down economy. One is located in Southern California. Unlike many other companies in the

woodworking industry, Corona Millworks is weathering its region's housing slow-down by increasing sales through added product offering and increasing the quality of existing products. Corona's sales are indeed increasing as the company has added drawer boxes and cabinet component parts to its offering of solid wood and RTF cabinet doors.

Southern California's historic booming economy and five years of unprecedented residential building growth had fueled Corona's earlier expansion. Simply put, many cabinet shops, large and small, could not keep up with demand and relied on outside suppliers like Corona Millworks for those component parts — like doors, drawer boxes and components — that they could not make in-house.

The present condition of the building market for Corona Millworks customers has decreased the overall market demand for cabinet doors and drawer boxes. However, today's changing economy still requires outsourcing of doors and drawer

boxes as well as cabinet component parts. The demand for doors and drawer boxes, albeit reduced, is still there. The key for Corona's continuing growth is to gain existing market share for doors and drawer boxes and add cabinet components parts to its customers' orders.

"To gain market share in wood doors, Corona Millworks addressed quality improvements and added value," Corona's president/CEO, Jose Corona, says. "Quality and added value are key to our gaining market share."

Part of that quality control program involved adding new automated equipment, including two SCM Concept 1000 single-end CNC tenoners.

Says Corona: "These were added to ensure absolute squareness of solid wood doors as well shorten production time. Both tenoners are dedicated to outside edge details and both are equipped with tool changers on the machining spindles. The machining spindles are liquid-cooled CNC router spindles that machine



with insert tooling from Leitz. Flex trim abrasives are on the sanding spindles. The outside edge details are perfectly machined by the tenoner.”

Added value was accomplished with the addition of DMC Masterbrush sanders, Corona says. The sanders white-wood sand all doors (on customer request) so that they are ready to accept finishes. The sanders were also equipped with Flex Trim abrasives so that the sanding scratch pattern on the outside edge details created by the tenoners will match the door faces and backs sanded by the Masterbrush.

Humble beginnings

Corona Millworks was founded in Santa Fe Springs in 1995 in a 1,000-sq.-ft. building.



The management team at Corona include, left to right: CEO Jose Corona; Rolando Barquero, plant manager; Cathy Medina, CFO; and Brian Biegert, director of sales and marketing.

CORONA MILLWORKS

Year established	1995
Location	Chino, Calif.
Products	Solid wood raised panel and rigid thermofoil kitchen cabinet doors, drawer boxes and cabinet components
Market area	Southern California
Facility size	45,000 sq. ft. — Solid wood doors 12,500 sq. ft. — RTF doors 12,500 sq. ft. — Drawer boxes and cabinet components. Total manufacturing space nears 70,000 sq. ft.
Employees	150+
President & CEO	Jose Corona
Yearly sales volume	\$10 - \$20 million

Originally founded as a general contractor, Jose Corona started building his own cabinets for his own projects. As he grew his contracting and cabinetmaking business, Corona grew ever more dissatisfied with lead times from cabinet door suppliers.

His first employee knew how to make doors and suggested that they do so. They bought some shapers and a sander and started making doors. They began soliciting neighboring cabinet shops for door orders and quickly decided that the door business was going to be a full-time business.

Shortly thereafter, Corona Millworks moved to a 12,000-sq.-ft. building in Chino where the company stayed until the end of 2004. In January of 2005 the company moved to its present 70,000 total sq. ft. of manufacturing space. This location allowed the doubling of sales with the same number of employees. This was accomplished with new machines, better plant layout and improved material flow and reduction to one shift.

Doors and drawer boxes are sold direct to custom kitchen cabinet manufacturers. Corona has its own direct selling sales force managed by sales manager, Brian Biegert. Brian oversees the team who calls on those shops that don't make their own doors or drawer boxes as well as those shops that do but need specialty species or types of doors that Corona can produce.

Corona: “We manufacture solid wood cope and stick five-piece raised doors, mitred five-piece raised panel doors and MDF core rigid thermofoil doors (RTF). We originally purchased two SCM Routech Record 125N CNC routers and a Wemhöner membrane press for the RTF door division. RTF now accounts for 25 percent of our sales and continues to grow. In late 2006, we added a third Routech R125N CNC router to meet increasing demand for RTF doors.

“A fourth Routech CNC router is on order to add capacity for nested-based produced cabinet component parts. Daily production ranges from a low of 1,000 to high of 4,000 doors per day with a mix cope and stick, mitre and RTF styles.”

Lead times

Lead times for catalog items average five to seven days, Corona says.

“Short lead times are being maintained as a result of a better organized and more productive plant and experienced order desk personnel,” he explains. “Online ordering and MAS 90 system have eliminated the need for duplicating order entries, shortening lead times.”

In 2007 Corona began manufacturing drawer boxes. The drawer box product range includes prefinished solid wood dovetail, prefinished plywood dovetail and melamine doweled drawers. Notching for undermount drawer slides is an available option. Draw box business has grown beyond expectations necessitating a new separate building and more machinery. The new drawer box building is now fully



An OMECF11 dovetail machine gets a lot of work at Corona.

operational and is its own division of Corona Millworks.

Dovetailing is machined on one of two Omec dovetailers. The dowel drilling and insertion is done on a Gannomat Index CNC drill and dowel insertion machine that is equipped with top drilling. All melamine drawers are edgebanded on an SCMI K1000 FRT edgebander.

Cabinet components are milled on one of the Routech R125N CNC machines. Corona utilizes Cabinet Vision for optimized down-loaded cut lists and employs nested-based manufacturing. Nesting meets Corona's requirements for quick shipping of small batches of custom cabinet component parts.

The parts requiring dowel insertion are drilled and doweled on the Gannomat



A DMC Unisand widebelt planer/sander sands doors and other parts at Corona.



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The SCM Routech R125M CNC machining center performs multiple tasks at Corona.

Index which is also linked to Cabinet Vision. Edgebanding is applied on the SCM K1000FRT edgebander. The cabinet component business is also a division of Corona Millworks and is operated in the same building as the RTF door production. Corona Millworks sells only unfinished doors.

Corona's customers can buy doors, drawer boxes and cabinet components with the convenience of single sourcing. Each division — doors, drawers, components — has its own dedicated manufacturing spaces that are in close proximity to each other allowing for the convenience of same truck deliveries. This single-source convenience, coupled with Corona's commitment to high-quality, fuels Corona's growth in what many perceive as a temporarily declining market.

Corona was asked a number of questions relating to how he managed to grow his business.

Wood Digest: What type of IT/ERP program do you use? How is it integrated into the manufacturing scheme, if at all? How are orders received, and how is that information transferred to the production floor? What is the product flow scheme?

Corona: Software integration within the plant has been implemented by our controller, Cathy Medina. Cathy selected MAS 90 for order input, material tracking, forecasting, etc. The next step of linking the RTF door order input with the CNC routers to

avoid duplicate entries has been established. Orders are placed via phone, fax or online (www.coronamillworks.com).

We use Alpha Cam for MDF doors and Cabinet Vision for the cabinet component part nesting. We do not yet use a saw optimization program for drawer side parts as standard widths are pre-cut for inventory, then crosscut to length per order.

Key machinery includes an SCM M3 gang rip saw that feeds two SCM Super-set Control 20 moulders. These moulders have a quick setup feature that allows instant changeover of up to six different stick details in seconds. Each moulder carries a set of six different stick profiles so we can run as few as one piece at the push of a button. These new moulders contribute to the short and consistent lead times as lost time with moulder changeovers is now a thing of the past. Dimter crosscut saws from Michael Weing optimize moulding cut lists, reducing waste and shortening lead times. A second Dimter was recently installed in the drawer box factory to optimize yield of drawer box component parts

WD: How are your raised panel doors produced?

Corona: Raised center panels are glued and clamped, then run through two DMC planer sanders. These machines are placed in-line

with a motorized belt conveyor where operators on both sides of the conveyor can flip the panels for single pass processing.

Doors are then assembled and calibrated and presanded on a sanding line composed of a three-head SCM Sandya 10 widebelt and a four-head DMC Unisand widebelt sander. These two machines are in-line and connected with an SCM Mahros belt conveyor. The doors are sanded on the reverse side with the Sandya, then manually flipped on the conveyor so that the face side is sanded on the DMC. Future plans are for a four-head bottom sanding widebelt sander that will replace the Sandya and eliminate the manual flipping process.

The doors are then finish sanded and cross-grain scratches are removed on the DMC Unisand that is composed with one widebelt and two orbiting heads. There is a second machine equipped the same way that will be connected with an SCM Mahros conveyor. This second sander will allow reverse side finish sanding with cross-grain scratch removal eliminating the return and reverse side rerun of the door.

The third sanding pass is with two DMC Masterbrush machines placed in-line. These machines provide our customers the option of having their doors white wood sanded and ready for finish when delivered. This added-value option releases the customer from the time intensive white wood hand sanding operation required for the application of finishes.

Edge details and some raised panel details are presently machined on one of two SCM Concept NT CNC single-end tenoners. The tenoners are equipped with 24-position tool changers on each cope and jump cope head. The coping heads are electrospindles of the same type used on CNC routers. The sanding heads are conventional belt drive units with inverters. The abrasive media on the tenoners is Flex Trim. The tenoners have dramatically increased the quality for the doors by machining them perfectly square. The finish quality is very high as well as the tenoners are equipped with Leitz insert tooling and Flex Trim abrasive sanding heads.

WD: Do you use bar codes to track doors?

Corona: No bar codes are presently being used but are planned for with the



An Olympic K1000 FRT edgebander was recently added to the Corona plant.



Corona Millworks' logo is laser engraved on all of the drawer boxes.

cert with the factory materials. Rolando sets up the machine specific training and selects the operators. Those operators are trained in safe use and operation of the machine to which they are assigned.

WD: What is your capital equipment cost-justification process for your major pieces of machinery?

Corona: The justification process starts when a particular department starts incurring overtime. This overtime may be a result of a need for machine in that department or it may mean a need for a machine upstream. In the case of the panel department, the planer sander operators were experiencing overtime because the panels had to be sanded front and back on one machine.

This meant the panels had to be stacked and returned to the operator. The new planer sander eliminates the stacking and returning process and keeps the panels moving. This anticipated flow increase was going to create a bottleneck downstream at the finish sanding department, so a second sander was purchased to avoid that anticipated bottleneck. In the case of the tenoners, we learned that the first installed tenoner eliminated the need for multiple shapers and edge profiling machines for the machining of outside edge details. The ongoing installation of the second tenoner will eliminate all edge profiling machines as well as nearly all shapers. We rely on our local SCM distributor, Advan-Tech Woodworking Machinery, for assistance in identifying production improvements. Mike Posey of



Advan-Tech keeps us up to date on the latest technology.

WD: Do Southern California environmental regulations affect your business?

Corona: No effect as all glues are water-based and finishing is not performed.

WD: In the highly competitive cabinet door sector, how are you able to compete?

Corona: We remain competitive and continue to grow because we have the good fortune of finding and keeping the right people. Plant personnel are always on the alert for ways to increase production efficiency and improve quality. Adding drawer boxes and cabinet components has led to increased sales from existing customers and provide more incentive to new customers to not only buy doors but drawer boxes and components as well.

WD: What is your biggest challenge as a business owner?

Corona: Challenges include constant monitoring of the plant to identify improvement opportunity, pursuit of new markets like drawer boxes and cabinet components, improve product quality and to remain competitive while delivering the highest level of customer satisfaction. **W**

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Wood Doors
Thermo-Foil Doors
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