

A UNIQUE LOOK

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313 Series Finger-Joint Miter Machine Rev. D



**The
313 &
313 GT**

**FINGER JOINT
MITER DOOR MACHINES**



313 Series Finger-Joint Miter Machine- Basics

Standard

Original 313 Belt Drive

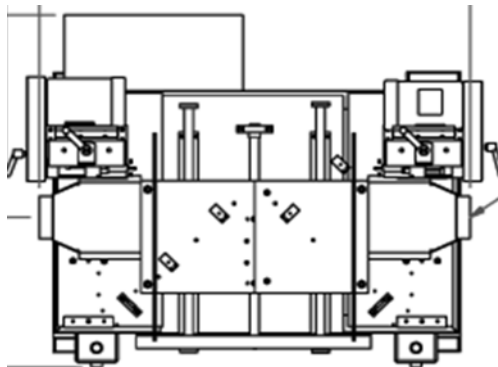
(2) 5 HP Shaper Motors

Round Rail Linear Rails & Bearings

One tool on each side no stacking

STD Includes Cutters

Productivity : Cycle time under 10 seconds



Optional GT Series

Direct Drive GT – GT2 - GTX

(2) 10 HP Shaper Motors

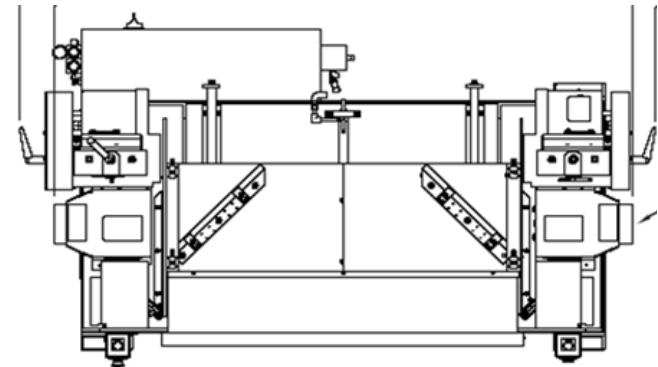
Square Rail Linear Rails & Bearings

One or Two tools on each side w/ stacking

GT2 Includes STD + Hoggers

GTX Includes STD + Hoggers + Score Saws

Productivity : Cycle time under 10 seconds



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313 Series Finger-Joint Miter Machine- STRENGTH

**WHEN
PUT TO
THE
TEST...**



**THIS
JOINT
STANDS
UP
BEST!**

Proven 40% stronger than mortise and tenon joint
Finger Joint is exposed, shows strength of product.
Exposed Joint selling point similar to dovetail drawers
Fingers "line up" inside panel groove on stiles & rails
Glued joint is stronger than the wood

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313 Series Finger-Joint Miter Machine- Basics

Simple to Operate, its easy to insert your square finish cut stiles or rails into the machine two at a time and the machine will Hog the entire miter, while applying a finger joint and then drill for dowels, **all in one FAST cycle.**

Strength, the carbide insert **finger joint cutter** produce the strongest joint on the market.

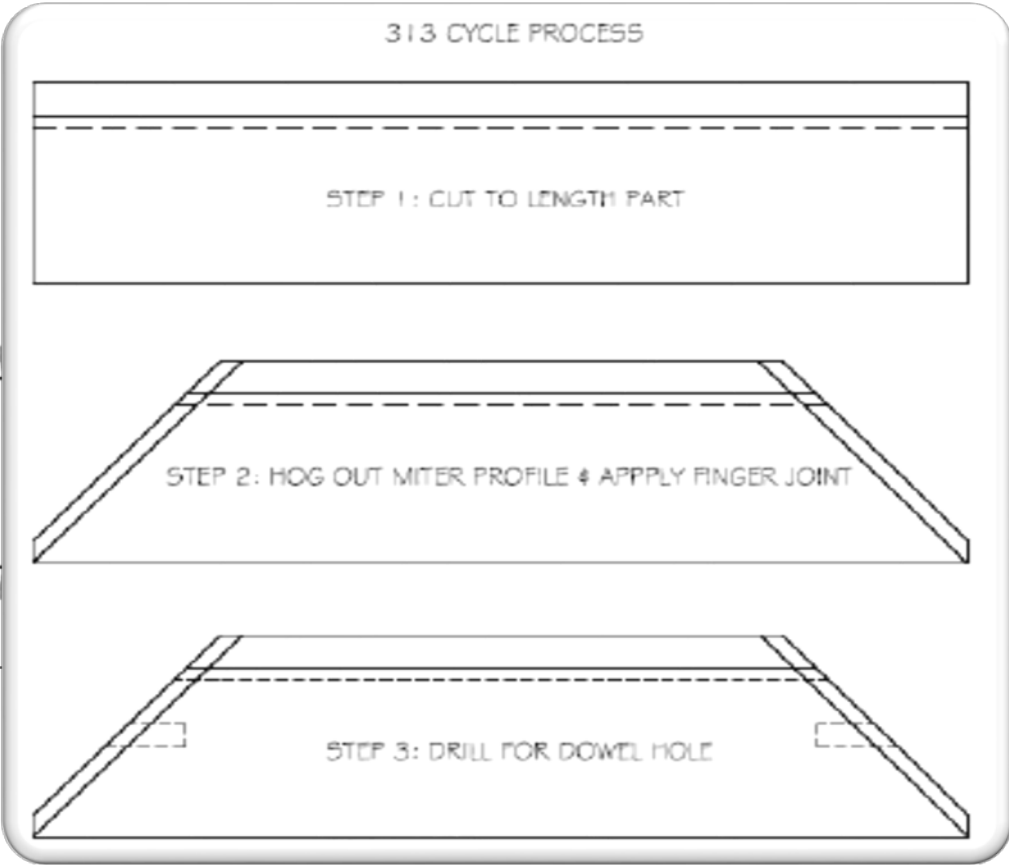
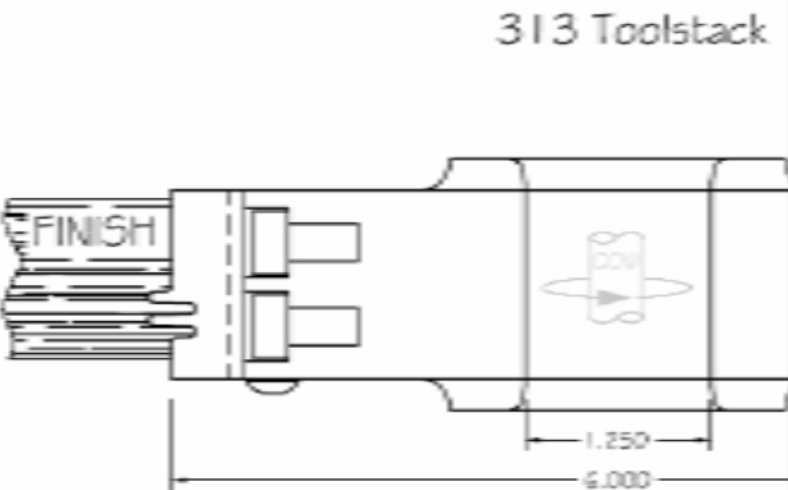
Assembly is easy with the precision-drilled hol for dowels, alignment is a snap!

Safe operation is achieved through the use of highly visible guards, hands free foot valve to actuate clamping, and dual hand actuated start buttons.



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313 STD and GT Finger-Joint Miter Machine- Process

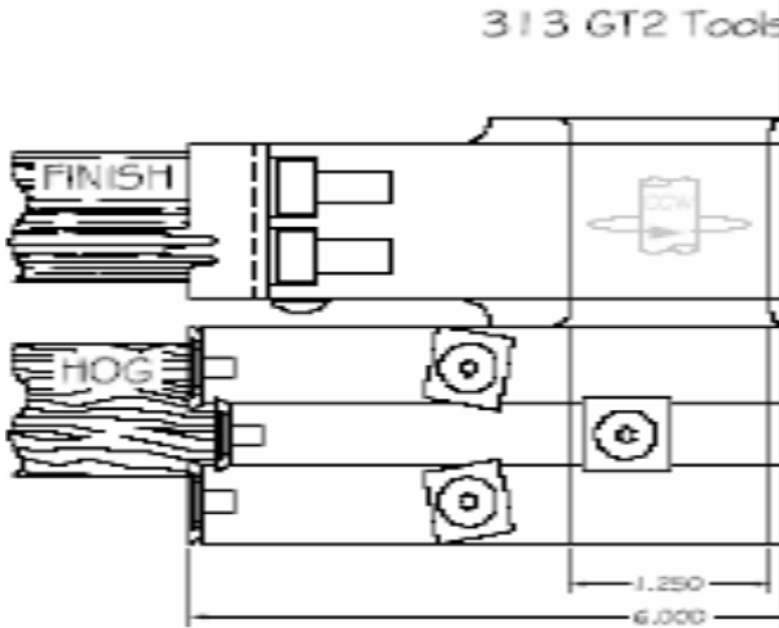


Miter and finger joint performed at the same time, then dowel hole is drilled



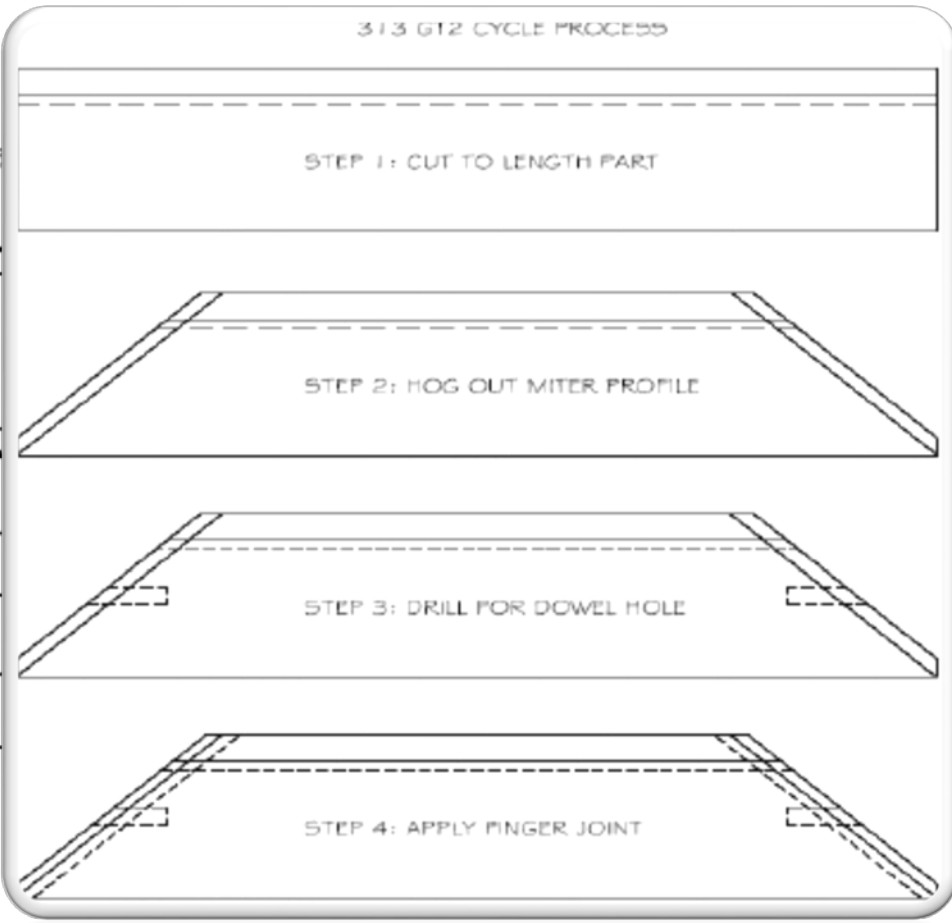
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313 GT2 and GTX Finger-Joint Miter Machine- Process



Miter HOG performed prior to drilling for dowel

Finger-joint is applied on return stroke.



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313 STD Finger-Joint Miter Machine- Basics



(2) 5 H.P. Belt driven Baldor shaper motors

(2) 1/3 HP Belt driven Baldor drill motors



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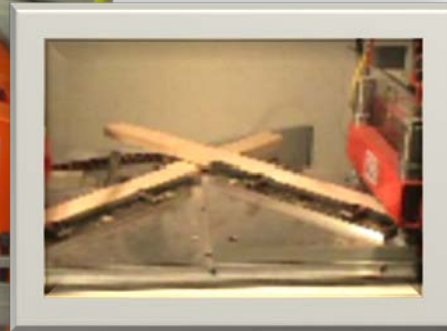
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313 STD Finger-Joint Miter Machine- Basics



Unlimited length parts are possible with staggered table



The automatic feeding table rides on Round rail shafts and linear bearings



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313 GT Finger-Joint Miter Machine- Basics



The second generation of our successful 313 Miter Door Machine, the 313GT replaces belt driven motors with two 10 H.P. Direct Drive Variable speed motors, a wider one piece welded frame and THK square rail linear guides and bearings.

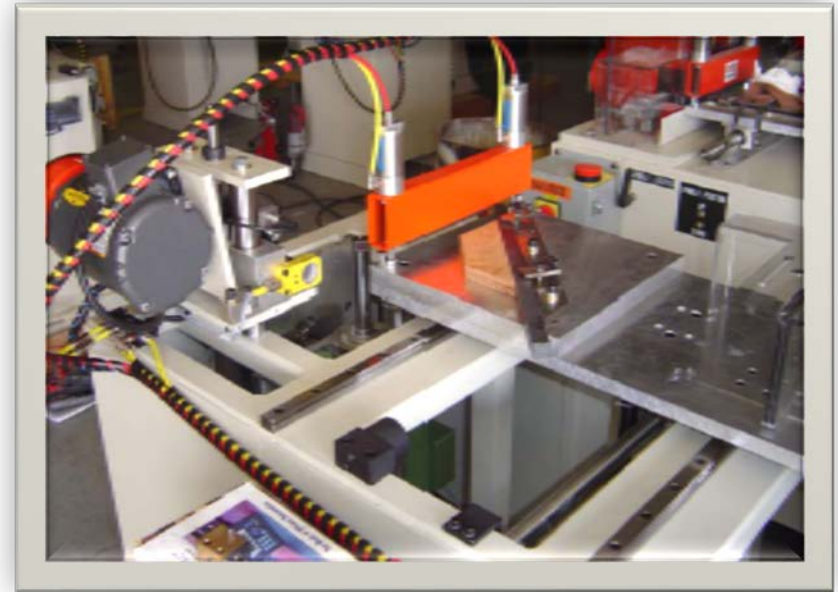


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313 GT Finger-Joint Miter Machine- Basics

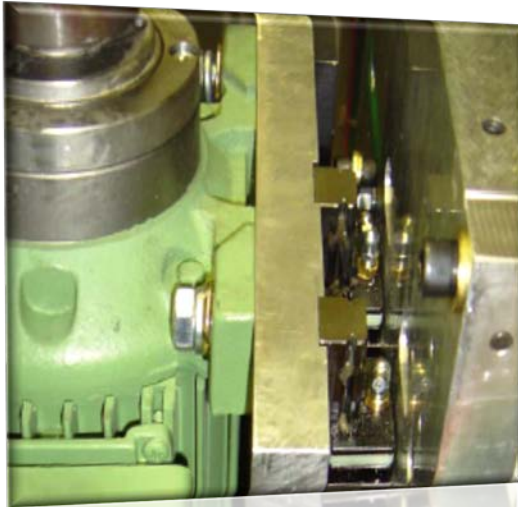


The GT's Frame is Precision Machined by a very large CNC Mill after the Frame is welded, ensuring accurate placement & alignment linear motion rails and components

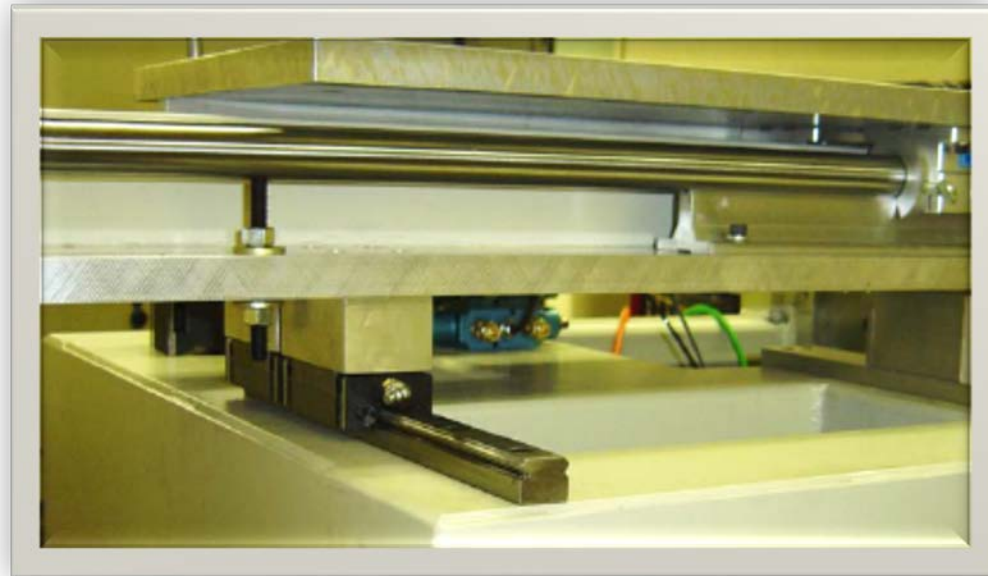
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313 GT Finger-Joint Miter Machine- Basics



•The GT Series incorporates Linear Rails and Bearing Motion on all Axis including "Square Rail" guide construction on the motor spindle cutter positioning and the Y-Axis work table movement.



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313 GT Finger-Joint Miter Machine- Basics



A 3 position turret stop is a GT Std feature. this allows for quick adjustment of dowel depth between different width rails.

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313 GT Finger-Joint Miter Machine- Basics



The 313 GT's two, 10 H.P., direct drive, variable speed (6,000~9,000 R.P.M.) Perske motors are a upgrade from the original 313's 5 H.P., belt driven motors.



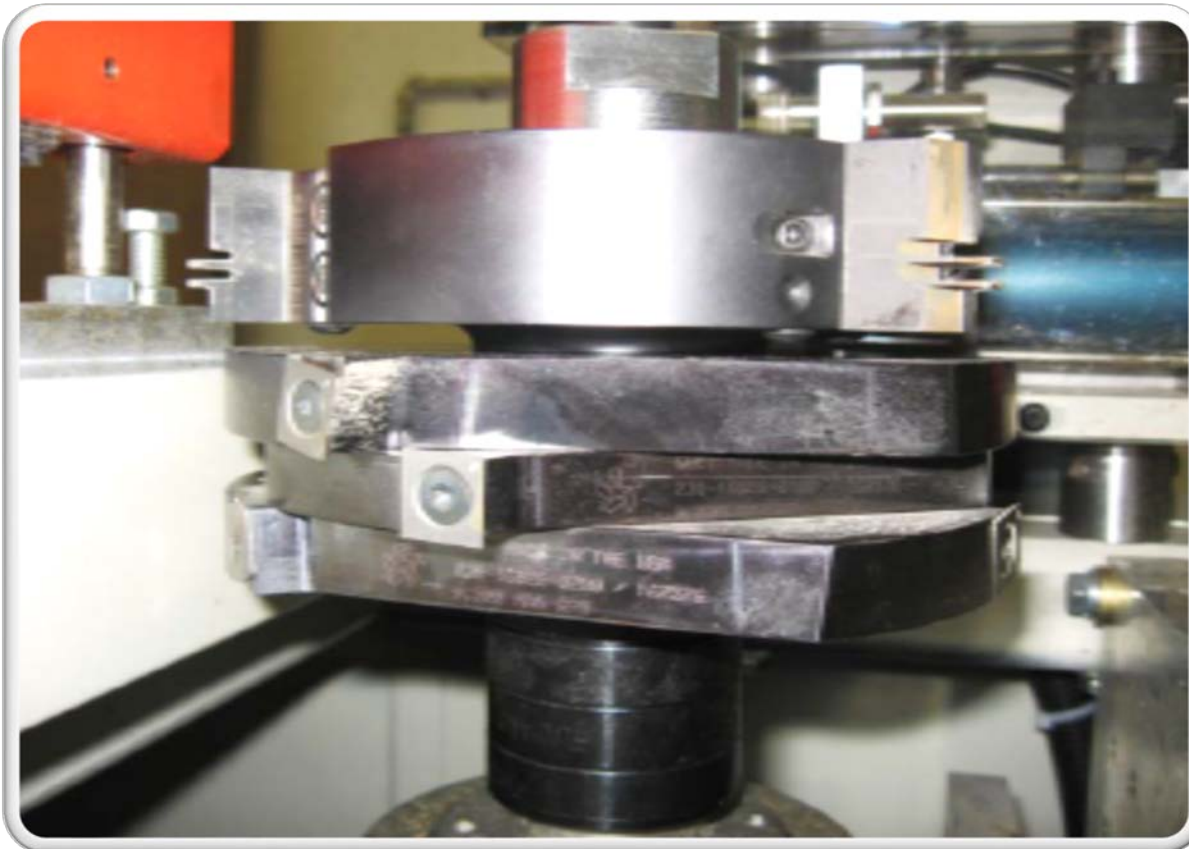
- Variable frequency drives produce a RPM range from 6,000 ~ 9,000 STD RPM

The direct drive motors are designed for years of maintenance free use with class seven bearings. The lack of additional belt and pulley provide less stress on the spindle bearings.

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313 GT2 Finger-Joint Miter Machine- Special Tooling



The 313 GT2's included hogging cutter is a three part head with up-shear on bottom head, no shear on center and down-shear on top head. This will provide a cleaner cut with cutters always "cutting into" the profile.

313 Frequently Asked Questions– Q&A

- How does the machine work?** Both the 313 and 313 GT2 operate in a similar way. Simply insert finished length square material into the machine (one of left side and one on the right side). Once parts are located against the stops, a foot pedal actuates the clamps. The operator then presses both of the two hand cycle start buttons and the machine will miter, finger joint and drill for the dowel. The 313 does the miter and finger joint in one step prior to drilling for the dowel, the 313 GT2 miters, drills for the dowels, then finger joints when the parts are returning back to the operator.
- Why two machine types for the same thing?** Determining what model is right is really up to how many doors you need to produce, see your salesman for assistance.
- Do I have to pre miter the parts before coming to this machine?** No, the precision machined table is set to a 45 degree angle and the shaper heads will make apply the miter.
- Why is this joint stronger than other style joints?** Glue is stronger than wood. The finger joints give more glue surface than any other style joint on the market.
- Why is such a strong joint required?** With Miter doors any alignment slip can be easily noticed. Once installed in the field, and as the panels expand and contract, the miter joints must hold their original 45 and keep the two stiles in each corner from separating under the stresses of the material expansion and contraction due to environmental moisture fluctuation.

45 Years of American Made Quality that is hard to beat!

313 Frequently Asked Questions– Q&A

- How much changeover will I have between profiles?** The only time changeover should be needed is if dowel placement needs to be in a different location. Both models have adjustable height on the drills and the 313 GT2 offers turret adjustment for horizontal placement of the dowel
- Are parts machined face up or face down?** Either way is fine. However, the machine is set up at the factory to machine face up. This prevents a chance of compound mitering if the decorative face is not parallel to the table.
- What is all included with the machine?** The standard 313 comes with one set of two counter rotating cutter heads with finger joint inserts and two ¼" diameter drill bits. The 313 GT2 comes with two hogging heads, one set of two counter rotating cutter heads with finger joint inserts and two ¼" diameter drill bits. Both machines are shipped with an instruction manual, bag of dowels and one sample door created on the shipped machine.
- How many doors can it do in a shift?** Both machines cycle at the same speed averaging about one minute to a minute and 15 seconds per door. Number of doors per shift is up to the operator from there.

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