



OMAL MITER 600 RT

Round End Tenon Machine for Stiles and Rails



CNC MITER TENON MACHINE

The Miter 600 RT is a CNC routing machine that will execute a precise 45° miter with a mortise and tenon joint on the ends of **solid wood and wrapped** cabinet door stiles and rails. The working head is equipped with 2 direct drive spindles. The machine has 3 interpolated axes managed by CNC control.

The work table is divided into two zones to allow for pendulum processing for fast processing times. The machining zone has opposing left and right references for perfectly mitered corners, cutting 1/8" off each end. OMAL can provide an OPTIONAL CNC positioned back fence to control the length of the stile/rail on the second pass.

Average cycle for mortise and tenon is +/- 20 seconds depending on part characteristics.

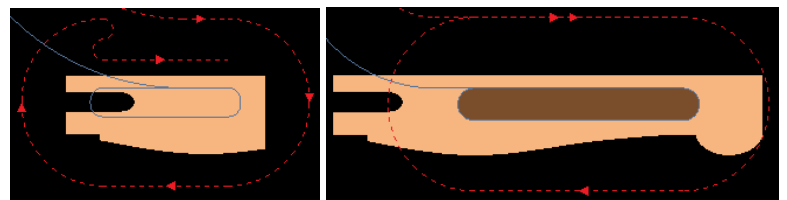
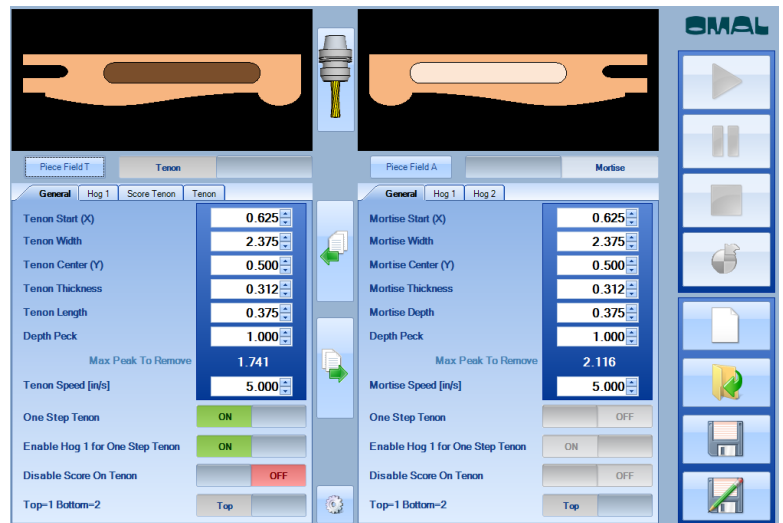
MITERBOARD SOFTWARE

The user friendly software makes the machine extremely versatile. The machine is equipped with a Windows PC interface used for writing and storing programs.

Some of the main features of the MiterBoard software are:

- DXF profile import
- Full control of the dimension and position for the mortise and tenon
- Multiple hogging operations for wide and complex shapes.
- Feed rate control for every step in the toolpath.
- Graphic representation of profile and toolpaths associated with the current program.

The tool path is completely controlled by the operator. Score depth, radius control, exit, entry, number of passes to cut the tenon, all controllable. This approach allows the operator to optimize the tool path for every type of wood and material.



MACHINE MOVEMENT

The Omal Miter is a fully programmable 3 axes machine. The movement of the carriage (X axis) is on linear rails with square guides and transmission by precision ball screw system. This allows acceleration to speeds up to 60 meters/min.

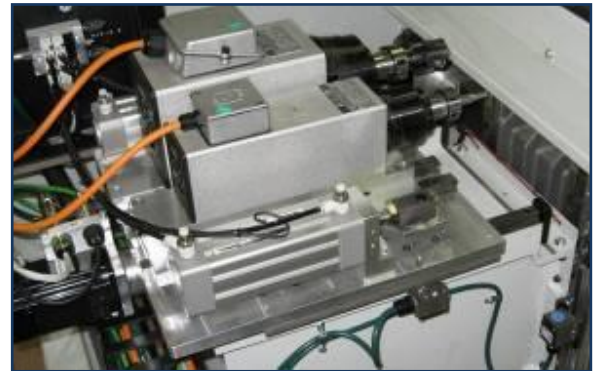
Vertical and horizontal movement of the carriage (Y and Z axes) is on linear rails with square guides and transmission by precision ball screw, which allows precise control.



MAIN ROUTER UNITS

The Omal Miter machine is equipped with two spindle motors

- 9.5 HP Motor to mill the round end tenon
- 3 HP Motor to machine the mortise.



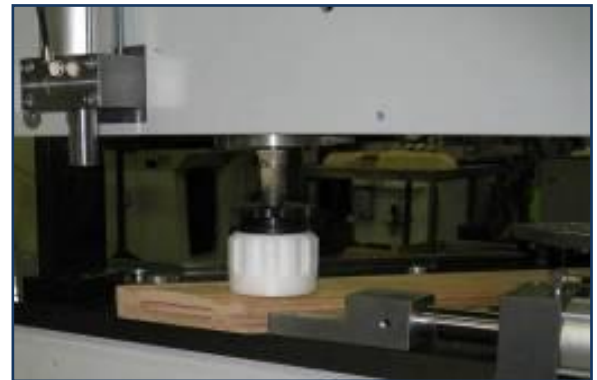
CLAMPING DEVICES

45 degree miter reference fence, mounts to center rail on machine for mitering door stiles and rails.

Pneumatically retracted front reference to stop part in an accurate position

Top clamp holds rail for machining.

Side clamp guarantees part is firmly against the 45 degree miter fence.



Back Fence Options

Manually Positioned Back Fence

- Manual back fence with dual digital read out (precision to 0.1mm) for precise sizing of rough-cut stiles and rails

Automatic Positioned Back Fence

- CNC back fence with digital read out (precision 0.1mm) for sizing Stile or Rail

Laser Automatic Positioned Back Fence

- CNC measuring system with auto compensation of the cutting depth up to 3mm.
- Accuracy of measuring cut length generally +/- 0.1mm depending on cut quality
- Maximum length 1250mm



SPECIFICATIONS

X axis

Working stroke 600 mm (23.6")
Carriage travel speed 60 m/min (195 FPM)

DEPTH "Y" axis

Working stroke 120 mm (4.7")
Carriage travel speed 15 m/min (49 FPM)

VERTICAL "Z" axis

Working stroke 120 mm (4.7")
Carriage travel speed 15 m/min (49 FPM)

Horizontal Router (MITER/TENON)

Rotation speed 18000 rpm, RH
Motor Power **9.5 HP**
Collet ER32

Horizontal Router (MORTISE)

Rotation speed 18000 rpm, RH
Motor Power 3 HP
Collet ER25

Max. Width of profile 90mm
Max. thickness of profile 40mm
Voltage 3Phase 480 V 60Hz
Power 10 KW
Control voltage 24 V
Air pressure 90 psi
Dust collection 2800 cfm

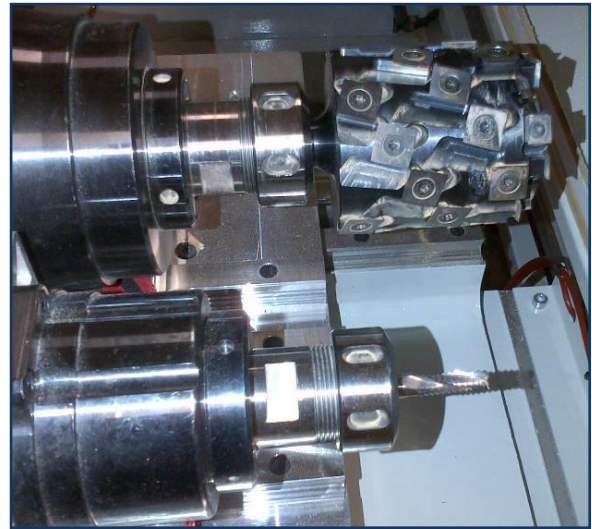
PC Numerical Control:

4 GB ram, Operating System: Windows 7, Color video flat screen monitor, 40 Gig hard drive, keyboard + mouse, Ethernet network card 10/100, Multitasking CNC, Connection to CNC with USB port

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