

OMAL MITER 600 2 RT Round End Tenon Machine for Stiles and Rails



macchine e
sistemi

OMAL

MACHINE SPECIFICATIONS:

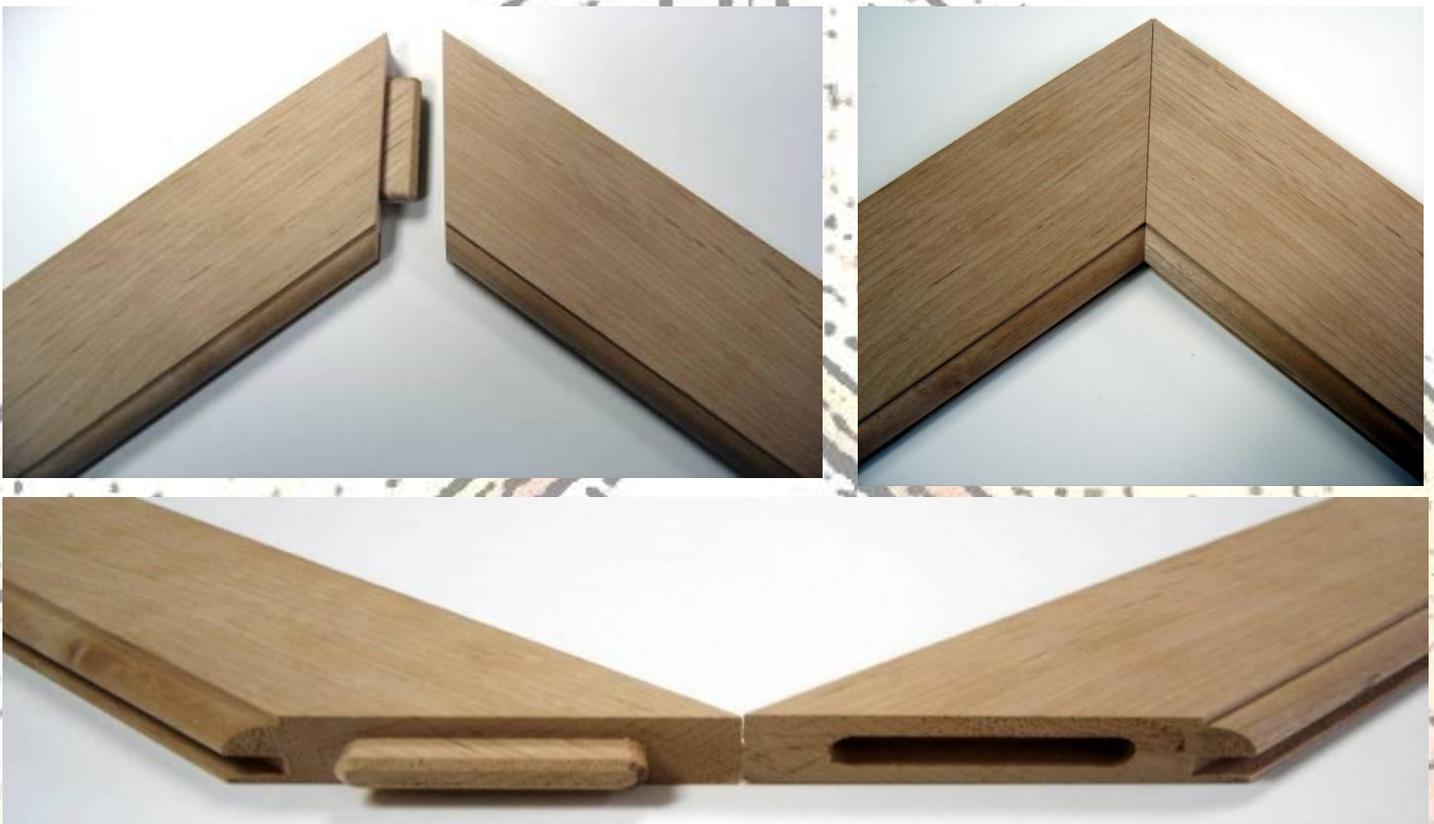
CNC END TENON MACHINE with TWO Spindles

The Miter 600 2 RT is a CNC routing machine specially studied to execute a precise 45° miter with a mortise and tenon joint on the ends of cabinet door stiles and rails. The working head is equipped with two (2) direct drive spindles and the machine has three interpolated axes managed by the CNC control.

The work table is divided into two zones to allow for pendulum processing and fast, consistent processing times. The machining zone has opposing left and right references for perfectly mitered corners and an OPTIONAL manually positioned back fence to control the length of the stile/rail. This option is equipped with a digital readout and end stop to precisely control length on the second pass.

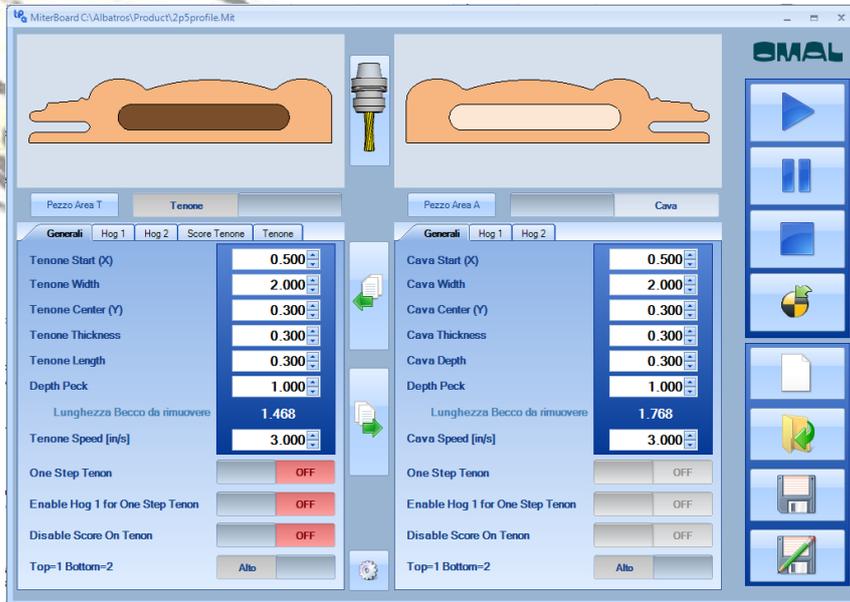


Average cycle for mortise and tenon is +/- 20-25 seconds depending on size.



SOFTWARE:

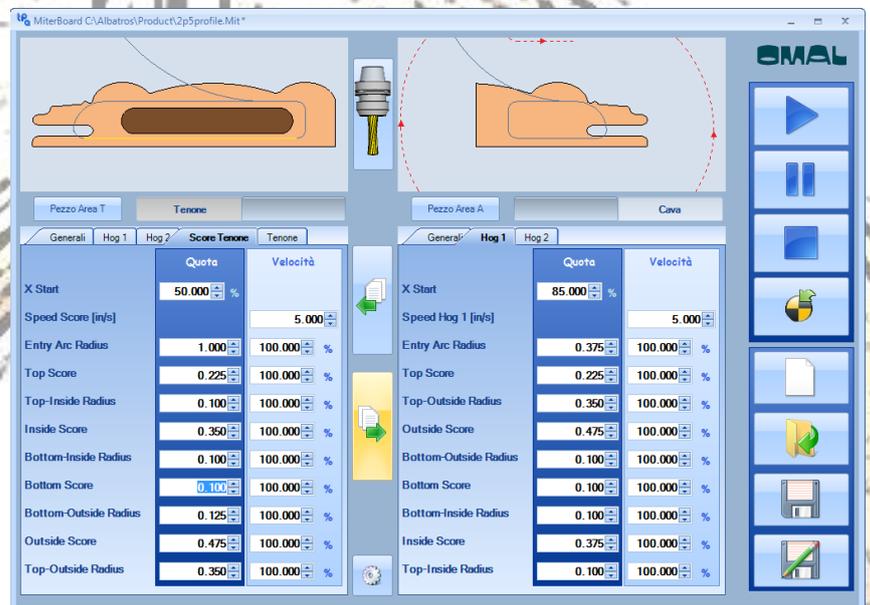
The user friendly software makes the machine extremely versatile. The machine is equipped with a Windows PC interface used for writing and storing programs.



We have developed special macros for the miter, mortise and tenon routines. These are written as sub programs and then positioned into the main program. They control the size and position of the mortise and tenon with one easy reference.

Easy and user friendly **graphical software** with **DXF profile importer and viewer**.

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



This machine is programmable in the X, Y, and Z axes, each of which is equipped with a brushless motor. The movement of the carriage is on linear rails with square guides and transmission by precision ball screw.

MACHINE WORKING UNITS:

X axis (Numerical Control):

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

DEPTH "Y" axis (Numerical Control):

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

VERTICAL "Z" axis (Numerical Control):

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



One Horizontal Router

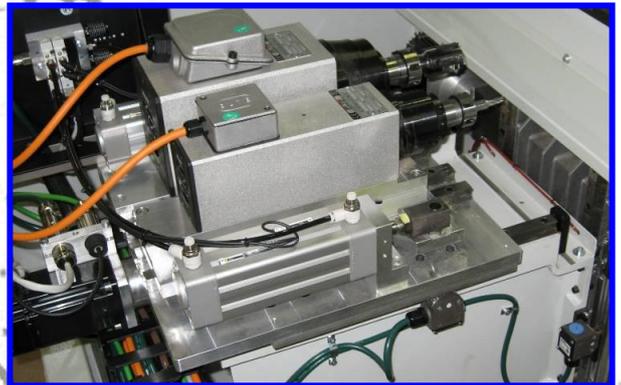
For mitering the pieces and milling the round end tenon

- tool rotation speed 18000 rpm
- Right Hand Rotation
- Motor Power 9.5 HP
- collet – ER32

One Horizontal Router

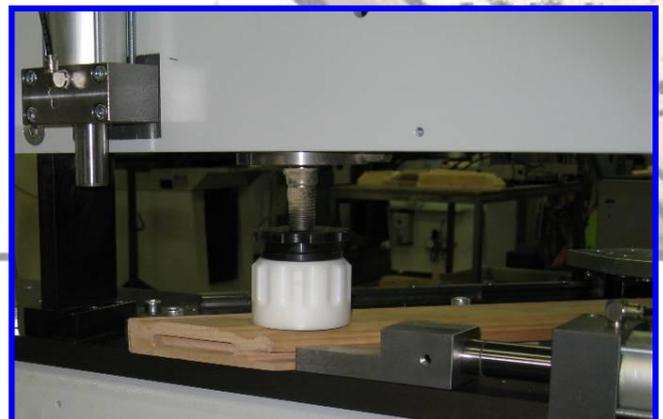
For milling the mortise

- tool rotation speed 24000 rpm
- Right Hand Rotation
- Motor Power 3 HP
- collet – ER25



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.



MACHINING CYCLE:

The tooling has spurs that cut a groove at the base of the tenon for excess glue and spurs that bevel the end of the tenon for easy assembly. The spurs that produce the bevel at the base of the tenon also serve to score the exposed edges of the part for clean, precise cut, free of any visible chipping. The mortising tool is a typical three-flute spiral roughing tool. Both tools are programmed with CNC tool compensation for quick and precise manipulation of the tools paths for perfect-fitting joints resulting in a high quality, durable door.



A pre-set amount of stock is removed from each end of the part during the machining process. If an accurate cut-off saw is not available, consider one of the optional sizing fences.

GENERAL INFORMATION:

-Voltage on request 3Ph	480 V 60Hz.
-Power	18 KW.
-Control voltage	24 V
-Air pressure	7 bar
-Dust collection	2800 cfm (4800 m ³ /hr) (4) connections @ 4 3/4" diameter (120mm)

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
- ❖ Maximum length 1250mm

Note: manually positioned back fence is not needed when stiles and rails are previously cut to a precisely-oversized dimension. The amount of oversize to be removed can be configured at the machine. 0.125" total oversize is typical.

Automatic Positioned Back Fence

- ❖ CNC back fence with digital read out (precision 0.1mm) for sizing Stile or Rail
- ❖ Maximum length 1250mm

