GENERAL DESCRIPTION

TWIN TABLE ROUND-END TENONER

INTRODUCTION



Model PICO is the last development of the revolutionary machine invented and manufactured in 1959 by Balestrini company.

It has been invented and realised for more than 40 years and it has constantly been developed and improved till becoming the present model which, unique in its range, the tenon execution takes places with fixed tables (workpiece not moving) and moving tool (Balestrini patent).

The machine is composed by a basement with two fixed tables, one head (tool), which moves from one table to the other by a special cycle described below to tenon.

MOTORS

2,2 kW tool rotation motor.

0,35 kW tool revolution motor drive.

BENCHES AND EQUIPMENTS – THE ADJUSTMENT



The precision is furtherly guaranteed by the fixed tables.

It is known that the more the wooden piece is stationary the more the precision of working is.

All the table adjustments (height, transversal, frontal and lateral tilting) are regulated in an easy way by the means of hand-wheels or adjusting screws with the same spanner given as equipment.

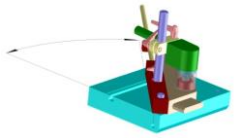
Every adjustments has a reference graduate scale and a mechanical zero point of absolute precision calibrated while assembling the machine. The clamping and releasing of the more common adjustments are equipped by handy handles.

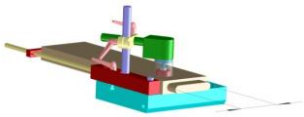


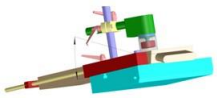
A positioning fence placed on the table will be used as adjustment in order to execute tenons at 0-45°.

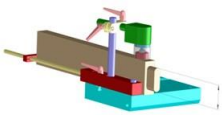
A frontal and a back fence complete the references of an easy execution. A pneumatic clamping cylinder on each table, completed by an anti-rotation fence, is placed in order not to interfere with the operator during the loading/unloading and to guarantee an easy adjustment.



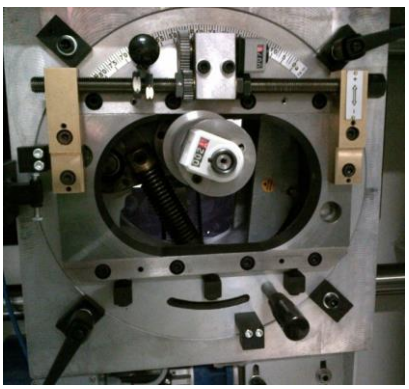








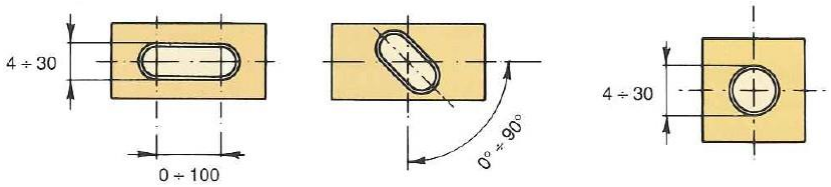
WORKING FIELDS



Two digital dimension displays are placed on the back side of the machine and they facilitate with a high precision the adjustment of the tenon length and of the tenon thickness.

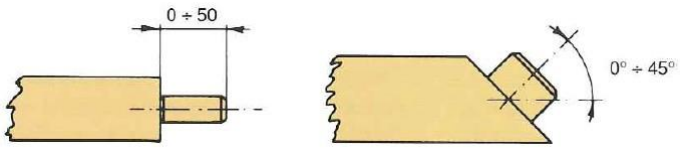
The depth of the tenon is adjusted on the tool.

The inclination 0-90° of the tenon on its own axes (see picture on the right bottom) is obtained by opening two handles and rotating the copy system till the desired grade shown on the scale.



Machine PICO is equipped by mechanical stops for the positioning at 0° and 90°.

The round-end tenoner can produce horizontal, vertical and tiltable tenons.



The movement of the tool has been intentionally developed by Balestrini so as to be able to work tenons with a high precision and to eliminate any possible splintering.

This result is obtained in a way where the tool is always working in favour of vein and it is rotating so that, once the working is done, it is not obliged to strain again on the already worked part. A second transition might result in lack of precision in the tenons quality. The working speed is not reduced by this anti-splinter cycle as the tool is positioned correctly during the translation from one table to the order.



EQUIPMENTS INCLUDED

Ordinary maintenance keys and adjustment.

SAFETY MEASURES AND ADVANTAGES

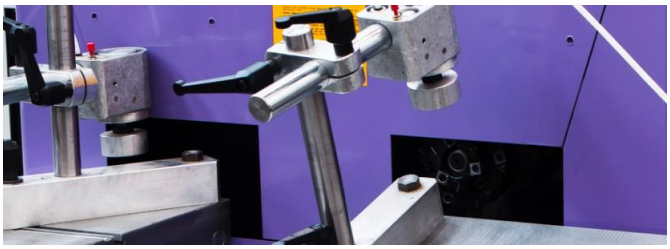
Thanks to the fixed tables it is possible to completely protect the tool movement leaving only two small openings for the piece to be worked. This does not only protect the operator from accidental contacts with the tool, but it also improves the efficiency of the dust extraction hoods and it reduces the machine noise.

The special execution movement done by the tool and by the fixed tables guarantee a perfect execution of tenons even on very long pieces as the wooden piece never moves during the execution.

The fixed tables let the operator work calmly without any need of continue moving in order to avoid the table movements and without any need of utilising particular supports for long pieces as bed sides, benches, garden furniture, etc...

The anti-splinter cycle is always running and it guarantees a good quality without increasing the execution time. On the contrary, this happens on the competitors machines where there is a waste of time and a decrease of quality

as the tool has to strain again on an already worked part.



In the CE version the additional hand protections are supplied; they are positioned on the clamping cylinders close to the table opening in the cutting area.

400 EU VOLTAGE

Electrical cabinet complete with air conditioning system to keep internal temperature below 35°C. Protection level IP54.

Standard voltage = 400 V +10 / -15% – frequency 50+60 Hz ± 1%

All CMS machines adopt the neutral wire connection to avoid any electrocution risk for the operator.

If the customer's network is a TN-C or TN-S type, with a standard voltage ranging within 400 V + 10%/-15% -50+60 Hz +/-1%, the machine can be connected to the mains electricity with no need for further protection unless against overcurrent.

In case of electrical networks other than TN-C or TN-S type, the customer shall provide a transformer to bring the electrical supply to the requested features.

For the differential protection (not compulsory for CMS machine) CMS suggests to use a delayed-action (selective) device type A, or better type B if available, with adjustable differential current.

MACHINE COMPLYING WITH CE STANDARDS

The machine complies with the applicable parts of the following Directives:

Directive 2006/42/CE

Directive 2004/108/CE

BALESTRINI STANDARD COLOUR

Standard colour CMS-BALESTRINI – RAL7035 (grey).