

Leaflet No 655/6

Wadkin

SINGLE END TENONING MACHINE TYPE ECA

(British Standard Classification No. 81.11)



SINGLE END TEN

This is a handy compact machine capable of handling cabinet work, light door work, sash stuff, etc., at high rates of production. It has been specially designed for fast, easy operation. Adjustments are readily accessible and easy to make. It is completely modern in design and is both economical in first cost and in maintenance.

The machine will tenon, scribe the shoulders and cut off to length at one pass of the table. It will take timber 14" wide by 4½" deep and cut tenons up to 5" long at one pass.

DESCRIPTION

Horizontal Headstocks

These are each arranged with an electric motor built in. The spindles are made from special steel of 40 tons tensile strength and mounted in heavy ball bearings. Both headstocks are adjustable vertically. Horizontal adjustment is also provided to both top and bottom spindles for producing tenons with unequal shoulders.

Provision is also made for adjusting both heads together so that the operator may position the tenon when once set for thickness.

Hand operated brakes are fitted to each spindle.

The cutterblocks are designed to give a shearing cut. Spur cutters are fitted for giving a clean and accurate finish to the shoulders of the work. The cutterblocks are secured to the spindles by keys and locknuts. Hinged guards are provided.

Vertical Scribing or Cope Spindles

The vertical scribing spindles are each attached to the main headstock slides and are, therefore, adjustable with them. In addition, they have independent vertical and horizontal adjustments, all of which may be operated while the machine is running. A separate motor is built into each head. The scribing cutterblocks are of steel and have four dovetail slots for carrying the slotted scribing cutters. The cutterblocks are secured to the spindles by keys and locknuts.

Spindles are arranged to take 11" diameter grooving saws.

Cutting-off Saw

The cutting-off saw is fitted at the back of the cutterblocks and is, therefore, well out of the way of the operator. The saw spindle is mounted in ball bearings and carries a 12" diameter saw. It is mounted below the table and is horizontally adjustable by screw and handwheel to suit the length of the tenon. A guard is provided over the saw.

Motors

The motors are built into the headstocks and are dust-tight, thus making impossible the entrance of dust or chips, which reduces maintenance to a minimum. They are made up of rotor and stator units and built directly into the machine with the cutterheads mounted on the extended motor shafts and can be supplied to operate from two- or three-phase alternating current of any voltage. The shafts revolve in heavy type ball bearings enclosed in dustproof housings.

Control Gear

The motors are controlled from a centralised push-button station, and the control gear is of the automatic contactor type. The contactor gear is built into the main frame and is dust-tight. A master stop shuts down all motors simultaneously and embodies a "lock out" feature which makes it impossible for the machine to be started inadvertently.

Table

The table is mounted on ball bearing rollers. The runways are accurately machined, and scrapers are fitted to keep them clean. The table is so arranged that perfect alignment with the cutterblocks is always maintained.

Table Fence

The table fence is provided with a turnover stop which can be utilised with equal facility whether the fence is in the square or angular position. In addition, a spring stop running the full width of the table is provided to enable the table to be loaded with narrow stock, such as sash bars. A quick-acting lever clamp is fitted for securing the work.

A dead stop is also provided for use in conjunction with the shoulder stop on the fence. This is adjustable along a bar and can be locked where desired.

TENONER TYPE ECA

Features

1. The machine is compact and economical in floor space.
2. The machine can be fitted with tenoning and scribing heads and cut-off saw.
3. All heads are direct motorised. All motors are totally enclosed and of ample power for the heaviest work.
4. Tenon and scribing heads have combined and independent vertical adjustment.
5. Smooth, easy table movement on ball bearing rollers, ensures fast operation and high rates of output.
6. Table carries swivelling fence with turn-over stop. Spring stop is provided across table for loading narrow stuff.
7. Quick-acting duplex single lever clamp.
8. Scribing spindles are arranged to take 11" diameter grooving saws.

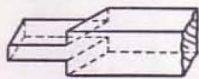
Some of the many operations that can be done on the Single End Tenoner, E.C.A.



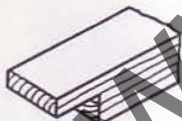
PLAIN TENON



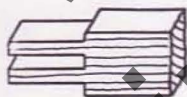
TENON WITH TOP & BOTTOM SCRIBE



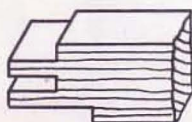
ANGULAR TENON



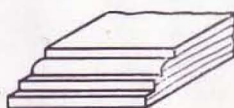
TEE-HALVING JOINT



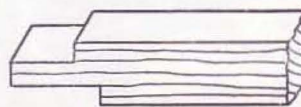
DOUBLE TENON



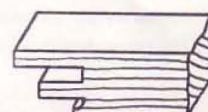
DOUBLE TENON WITH UNEQUAL SHOULDERS



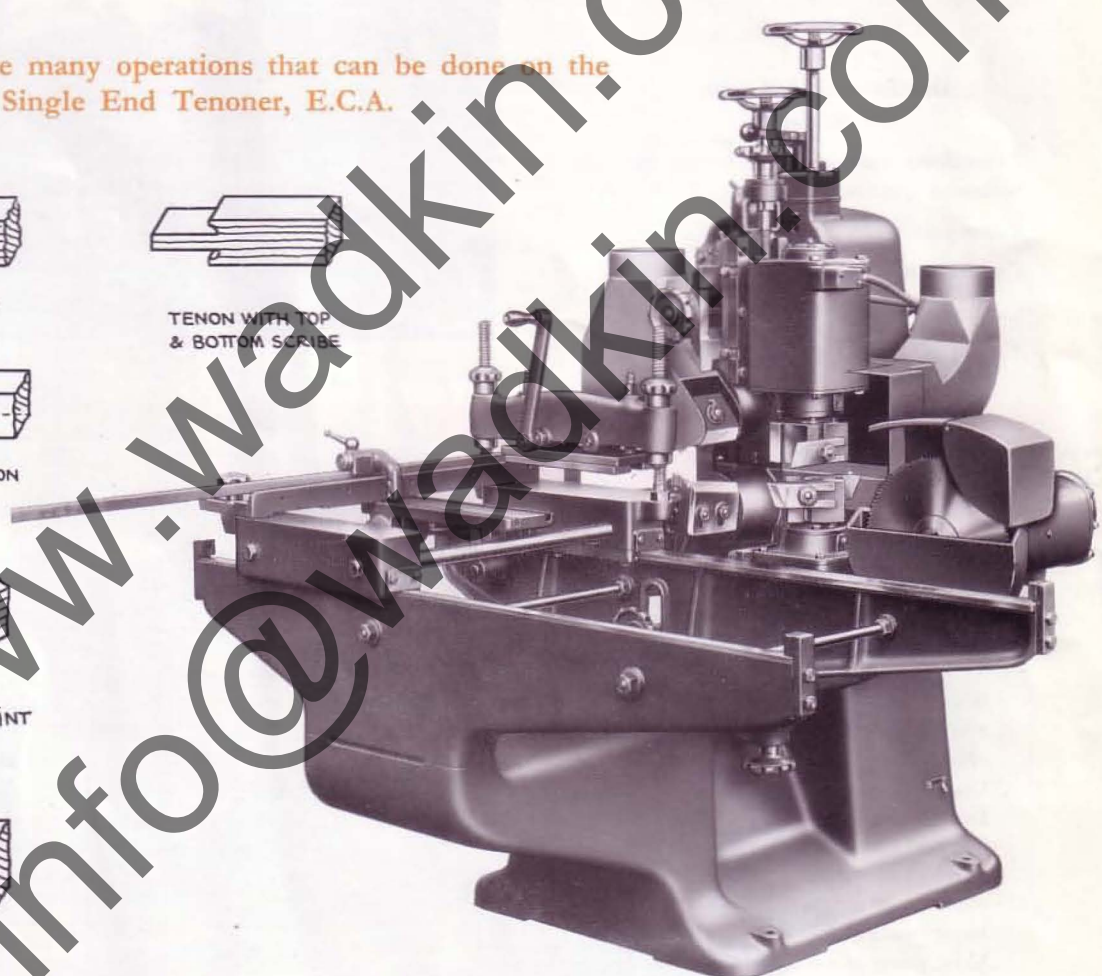
END MOULDING



SINGLE TENON WITH UNEQUAL SHOULDERS

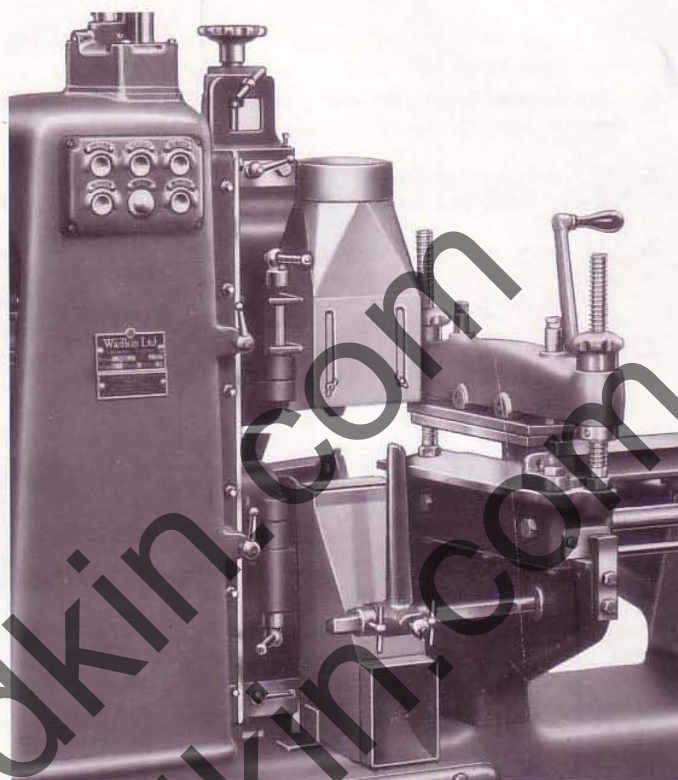


SASH CHECK RAIL



SINGLE END TENONER ECA

This illustration shows the dust hoods which can be supplied to the main tenon heads for connecting to an existing dust exhaust system. The cut-off saw is provided with a dust outlet, 2" in diameter. Generally, scribing or cope heads are not connected to the system, and the customer provides a floor-sweep fixed adjacent to the machine.



Details included with the machine

- Cutterblocks complete with cutters for horizontal spindles.
- Cutter guards.
- One set of spanners.
- Lubricating pump.
- Tin of ball bearing lubricant.

SPECIFICATION

Will admit timber up to ...	14" x 4½"	355 x 115 mm.
Will cut tenons at one operation	5" long	127 mm.
Fence may be swivelled 45 degrees for angular tenons.		
Top cutterhead will rise 4¼" (108 mm.) above table.		
Will take 5' 0" (1525 mm.) between shoulders of tenons using turnover stop.		
Size of table ...	30" x 16"	760 x 405 mm.
Height of table from floor ...	2' 9"	840 mm.
Diameter of cutting-off saw ...	12"	305 mm.
Diameter of horizontal and scribing spindles ...	1½"	31.7 mm.
Speed of all motors, r.p.m.: 50 cycles ...		3000
Speed of all motors, r.p.m.: 60 cycles ...		3600
Horse power of motors for horizontal cutterheads ...		2
Horse power of motors for scribing heads ...		2
Horse power of motor for rear cut-off saw ...		1½
Floor space (approximate) ...	5' 0" x 4' 9"	1525 x 1450 mm.
Net weight in cwts., complete machine with cut-off saw ...	20½ (2300 lb.)	1040 kg.
Gross weight in cwts., complete machine with cut-off saw ...	24 (2690 lb.)	1220 kg.
Shipping dimensions in cubic feet ...	112	3.2 c.m.



Wadkin Ltd.

GREEN LANE WORKS,
LEICESTER, LE5 4PF

Telephone: 0533 769111
 Telegrams: } Woodworker, Leicester, Telex
 Cables: }
 Telex: 34646 (Wadkin, G)
 and at YORK HOUSE, EMPIRE WAY
 WEMBLEY, Middx. HA9 0PA
 Telex: 262210
 Telephone: 01-902 7714 (3 lines)

As our policy is constantly to improve the design of Wadkin woodworking machinery the details given in this leaflet are not to be regarded as binding.