

Wadkin

Combined Surfacer and Thicknesser, F.M.

18" and 24" sizes

(British Standard Classification No. 12.81)



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18" and 24" Combined Surfacer and Thicknesser, F.M.

This machine represents a distinct advance in Combined Planing and Thicknessing machines. It is thoroughly modern both in appearance and performance. It takes less floor space, produces a better finish at a faster speed, is quicker and easier to adjust, is safer to operate and requires less maintenance. These and other advantages stem from the many engineering refinements and design features described in the following pages. On the 24" machine power rise and fall is an optional extra.

The more you examine the engineering of a Wadkin the more you will recognise that it is built to a standard of quality that is a guarantee of first-class work, and years of dependable service.

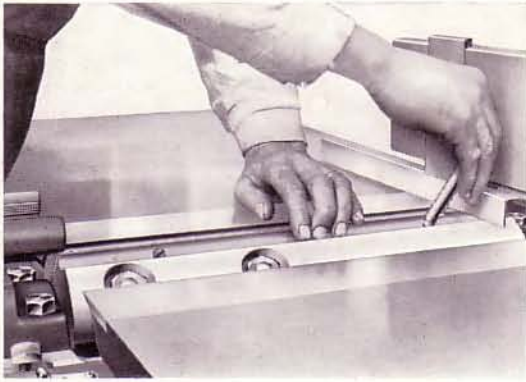
Features

- ▶ New wedge-type cutterblock on improved mountings giving vibrationless cutting at 4,500 r.p.m.
- ▶ More rigid mounting of the tables. Thicknessing table is a massive box member carried on a single massive slide.
- ▶ All working mechanism protected from dust and chips to ensure easy adjustments and convenient operation. Table is on dust-proof grease-packed raising gear.
- ▶ Surfacing tables precision ground for accuracy and smooth feeding of the timber.
- ▶ New type angled lift rear pressure bar allowing more sensitive control of the timber.
- ▶ Infeed pressure bar can be moved away from the cutterblock to increase the clearance for moulding.
- ▶ Vertical adjustment to the table rollers by one handwheel enabling the machine to be set instantly to suit the condition of the timber.

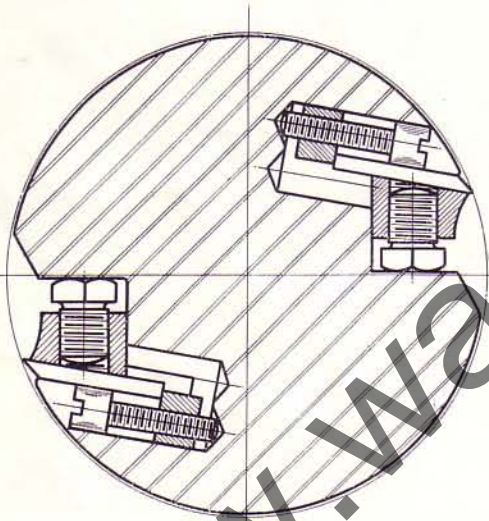


- ▶ Easy change, oil filled, ball-bearing gearbox giving three speeds: 25, 35 and 55 feet per min.

Specification



Cutter setting is an extremely simple operation due to the unique screw adjustment embodied in the cutterblock.



The Frame

The frame is exceptionally heavy to withstand the strain of the heaviest cuts.

The Surfacing Tables

The surfacing tables are long and ground dead true. They have horizontal draw-out motion for access to cutterblock and are fitted with steel lip plates. When required the front table can be arranged to cant for taper planing.

The Fence

The fence cants up to 45 degrees and is designed to give absolute rigidity in all positions. It is quickly adjustable across the table by handwheel, and the method of holding and guiding the fence avoids the need for a vee slot in the table. Lever handles lock the fence in any desired position on the table.

An extension on the front table enables the fence to be set back to allow the full width of the cutters to be used. Two adjustable holding-down springs are provided.

The Cutterblock

The cutterblock is of the two-knife safety circular wedge type arranged to give a shearing cut.

It has a 5" diameter cutting circle and is arranged to take moulding cutters which can be used without upsetting the planing knives.

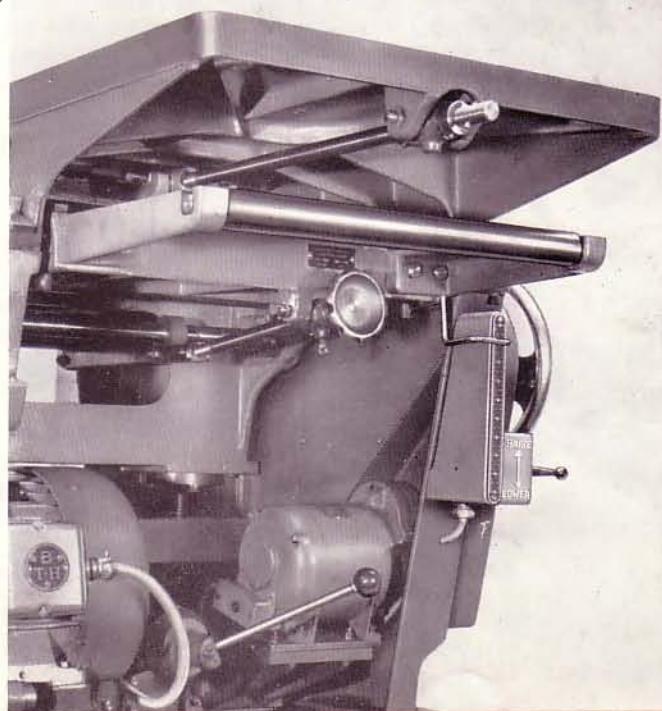
Micrometer screw knife setting is incorporated. The 18" machine has $20\frac{1}{4} \times 1\frac{1}{2} \times \frac{1}{8}$ " H.S.S. plain knives, and the 24" machine has $26\frac{1}{8} \times 1\frac{1}{2} \times \frac{1}{8}$ " H.S.S. plain knives.

The Thickening Table

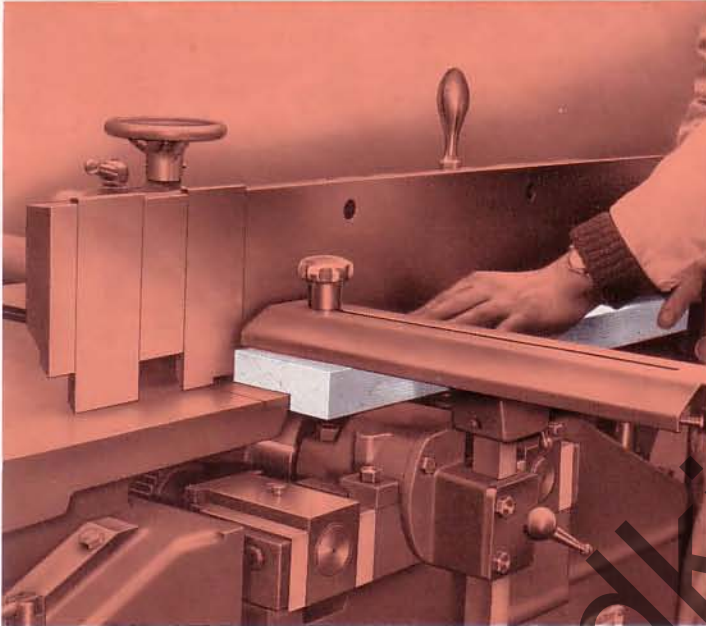
This table is a heavy casting of specially hard, close-grained metal. Its unusual strength eliminates all vibration and easily resists the strain and pressure involved in planing at fast feed speeds. It is raised and lowered on a single massive slide by means of screws operated by chain and handwheel, the latter being placed conveniently to the operator's hand. Anti-friction ball thrust washers take the weight of the table and permit quick and easy rise and fall motion. All mechanism is protected from harmful dust and chips, and the raising gears are totally enclosed and grease packed. Index scale registers exact thickness being planed. On the 24" machine power rise and fall to the thickening table is an optional extra. This is completely built-in and readily operated by a small lever adjacent to the handwheel.

Table Rollers

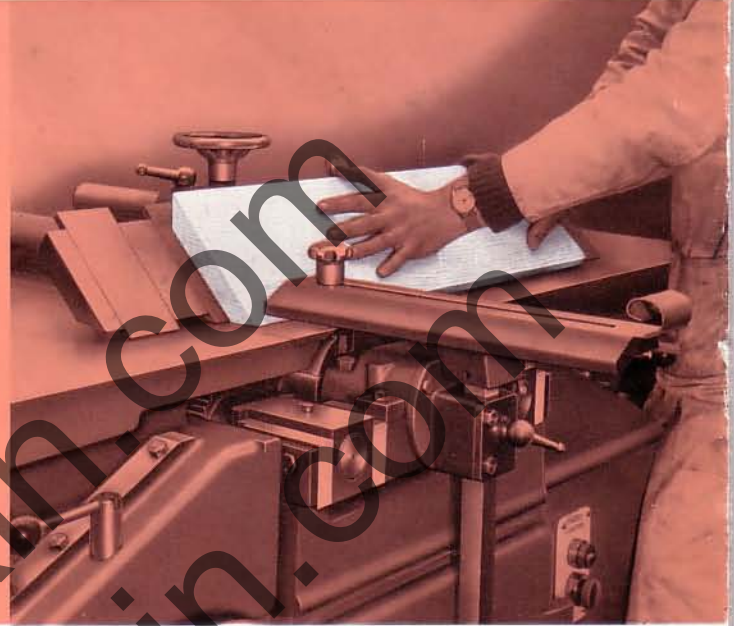
Table rollers are on ball bearings and arranged with a small vertical adjustment which is operated by a handwheel at the feeding end of the table. This is a very desirable feature enabling the rollers to be quickly set in relation to the table surface to suit the condition of the timber.



Power rise and fall as fitted to the 24" machine is an optional extra.



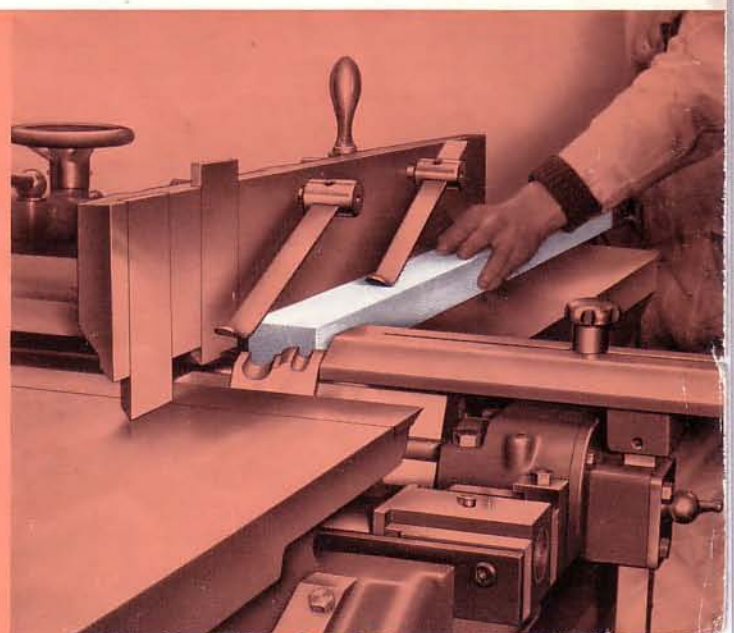
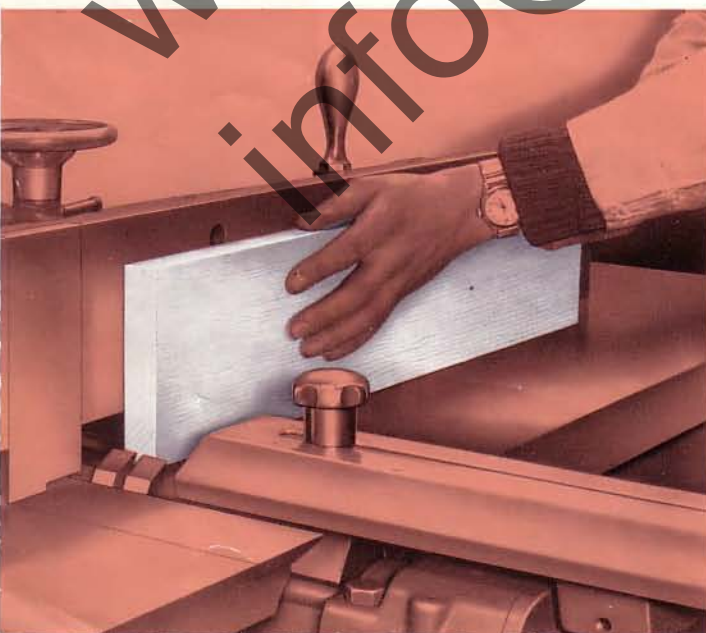
REBATING can be done $\frac{1}{2}$ " deep in any width of timber, or 1" deep when the timber overhanging the table does not exceed $1\frac{5}{8}$ ".



BEVELLING. Fence can be locked at any angle up to 45° .

TONGUING AND GROOVING. Back and front tables are set level and the fence adjusted to give the exact location of the tongue. After the tongues have been cut, the cutters are changed for the grooving operation.

MOULDING. Mouldings may be worked up to $\frac{5}{8}$ " deep without removing pressure bars. The timber is fed by hand as shown or for longer runs by the power feed on the thicknessing table without further adjustment.





Specification (Contd.)

Feed Mechanism

Feed mechanism embodies totally enclosed ball bearing, oil filled, gearbox giving feed speeds of 25, 35 and 55 feet per minute. The drive to the rollers is by heavy bushed roller chain giving a steady and positive drive.

Power Feed Rollers

Power feed rollers are steel and of large diameter. The feeding-in roller is grooved, and the feeding-out roller is plain. The rollers are mounted on oil-retaining bronze bushes with an additional oil reservoir.

The Pressure Bars

The pressure bars have a unique type of mounting, the rear bar being carried in a bronze block giving an angled tilt. This allows a very easy action and eliminates any tendency for the feed to stick. The infeed pressure bar also acts as the chipbreaker and is arranged to have two positions—readily selected—to enable the bar to be close to the cutters when planing and with good clearance when moulding. For heavy cuts the infeed roller assists the lift of the infeed pressure bar.

Feed Adjustment

Both feed rolls and pressure bars have adjustment for spring pressure and depth control. All these are readily accessible from the outside of the machine.

Guards

The safety guard provided on all machines is easily and quickly extended across the cutterblock. The guard draws back well clear of the cutters. Portion of cutterblock behind the fence is automatically covered at all times irrespective of fence positions.

Electric Drive

Both cutterblock and feed are driven by multiple vee belts from one motor built in to the end of the machine. This arrangement is suitable for 50 or 60 cycles A.C.

Control gear is of the automatic contactor type operated by push buttons. A "lock-out" feature embodied in the stop button prevents the machine being started accidentally or by inexperienced employees.

A built-in and pre-wired fused isolator is an optional extra.

Principal Dimensions and Capacities

	18" size	455 mm.	24" size	610 mm.
Thickening capacity	18" x 9"	455 x 230 mm.	24" x 9"	610 x 230 mm.
Maximum depth of cut when thickening	$\frac{1}{16}$ "	8 mm.	$\frac{5}{16}$ "	8 mm.
Surfacing capacity without removing fence	20"	505 mm.	26"	660 mm.
Maximum depth of cut on surfacing tables	$\frac{1}{2}$ "	19 mm.	$\frac{3}{4}$ "	19 mm.
Maximum depth of rebate in any width of timber	$\frac{1}{2}$ "	13 mm.	$\frac{1}{2}$ "	13 mm.
Maximum depth of rebate when timber overhanging tables does not exceed 1 $\frac{1}{8}$ " (40 mm.)	1"	25 mm.	1"	25 mm.
Maximum moulding capacity without removing pressure bars...	$\frac{3}{8}$ " x 7 $\frac{1}{2}$ "	16 x 190 mm.	$\frac{5}{8}$ " x 10"	16 x 255 mm.
Maximum depth of moulding, removing pressure bars	1 $\frac{1}{4}$ "	32 mm.	1 $\frac{1}{4}$ "	32 mm.
Length of surfacing tables overall	6' 1"	1855 mm.	6' 1"	1855 mm.
Length of thickening table	3' 7 $\frac{1}{2}$ "	1105 mm.	3' 7 $\frac{1}{2}$ "	1105 mm.
Length of thickening table over carrier rollers	5' 5 $\frac{1}{2}$ "	1665 mm.	5' 5 $\frac{1}{2}$ "	1665 mm.
Height of surfacing table from floor level	2' 10"	865 mm.	2' 10"	865 mm.
Fence on surfacing table cuts		45°		45°
Approximate speed of cutterblock in r.p.m.		4,500		4,500
Diameter of cutting circle	5"	127 mm.	5"	127 mm.
Standard rates of power feed in feet per minute	25, 35, 55	8, 11, 17 m.	25, 35, 55	8, 11, 17 m.
Horse power of motor		5		7 $\frac{1}{2}$
Horse power of rise and fall motor (optional)		5		7 $\frac{1}{2}$
Floor space	6' 1" x 4' 3"	1855 x 1420 mm.	6' 1" x 4' 9"	1855 x 1450 mm.
Approximate net weight	2688 lb.	1220 kg.	3276 lb.	1485 kg.
Approximate gross weight	3276 lb.	1485 kg.	3808 lb.	1730 kg.
Shipping dimensions in cubic feet...	103	2.9 cu. m.	113	3.2 cu. m.

Details included with each machine: Motor, control gear and insulated wiring; one canting fence complete with holding-down springs; one pair of solid high-speed steel cutters for safety circular cutterblock; one cutter guard; one lubricating gun and tin of lubricant; one set of spanners.

