OPERATING AND MAINTENANCE INSTRUCTIONS

5in. FDB 130 PLANING AND MOULDING MACHINE

INSTRUCTION MANUAL 1187

SPARE PARTS

Should spare parts be required due to breakage or wear full particulars including the machine and test number must be given. This information is on the name plate attached to the * of the machine and should be forwarded to the SERVICE MANAGER.

*On main frame, inside door below feedworks

SAFETY RULES

THE SAFE OPERATION OF WOODWORKING MACHINERY REQUIRES CONSTANT ALERTNESS AND CLOSE ATTENTION TO THE WORK IN HAND.

CAREFULLY READ INSTRUCTION MANUAL BEFORE OPERATING MACHINE.

DO NOT OPERATE WITHOUT ALL GUARDS AND COVERS IN POSITION.

BE SURE MACHINE IS ELECTRICALLY EARTHED - GROUNDED

REMOVE OR FASTEN LOOSE ARTICLES OF CLOTHING SUCH AS NECKTIES ETC. CONFINE LONG HAIR.

REMOVE JEWELLERY SUCH AS FINGER RINGS WATCHES, BRACELETS ETC.

USE SAFETY FACE SHIELD, GOGGLES OR GLASSES TO PROTECT EYES AND OTHER PERSONAL SAFETY EQUIPMENT AS REQUIRED.

STOP MACHINE BEFORE MAKING ADJUSTMENTS OR CLEANING CHIPS FROM WORK AREA.

BLUNT CUTTERS OFTEN CONTRIBUTE TO ACCIDENTS. AN EFFICIENT MACHINIST KNOWS WHEN RE-SHARPENING IS NECESSARY, BUT IF THERE IS RELUCTANCE TO SPEND TIME ON GRINDING AND RE-SETTING, THE CUTTERS MAY BE RUN BEYOND THEIR EFFICIENT LIMITS AND INSTEAD OF CUTTING EFFICIENTLY AND SMOOTHLY, THEY TEND TO CHOP AND SNATCH AT THE WOOD. THIS NOT ONLY INCREASES THE RISK OF ACCIDENTS BUT ALSO LOWERS THE QUALITY OF WORK.

CUSTOMERS ARE STRONGLY ADVISED TO USE AT ALL TIMES HIGH TENSILE STRENGTH CUTTER BLOCK BOLTS WHICH SHOULD BE TENSIONED BY MEANS OF A TORQUE SPANNER SET AT 21 MKG. - METRES KILOGRAMMES - 150 LBS. FT.

KEEP THE FLOOR AROUND THE MACHINE CLEAN AND FREE FROM SCRAPS, SAWDUST, OIL OR GREASE TO MINIMISE THE DANGER OF SLIPPING.

ATTENTION

THIS MACHINE CAN BE DANGEROUS IF IMPROPERLY USED.

ALWAYS USE GUARDS

KEEP CLEAR UNTIL ROTATION HAS CEASED

ALWAYS OPERATE AS INSTRUCTION AND IN ACCORDANCE WITH GOOD PRACTICE.

READ THE INSTRUCTION MANUAL.

NOTE:

THIS MACHINE, WHEN UNDER WORKING CONDITIONS, MAY PRODUCE A NOISE LEVEL IN EXCESS OF 90 D.B. "WADKIN" LTD., WILL SUPPLY INFORMATION ON ACOUSTICAL ENCLOSURES ON REQUEST, AND WILL REQUIRE A WRITTEN UNDERTAKING THAT THE NECESSARY STEPS WILL BE TAKEN TO ENSURE THAT THE MACHINE IS ONLY USED IN COMPLIANCE WITH THE TERMS OF HEALTH AND SAFETY AT WORK - ACT 1974.

IT IS RECOMMENDED THAT ALL PERSONNEL INVOLVED WITH THE MACHINE ARE ACQUAINTED WITH THE WOODWORKING MACHINES REGULATIONS, 1974 AND ALSO BOOKLET NO: 41 - SAFETY IN THE USE OF WOODWORKING MACHINES - THE LATTER IS ISSUED BY THE DEPARTMENT OF EMPLOYMENT AND AVAILABLE FROM HER MAJESTY'S STATIONERY OFFICE.

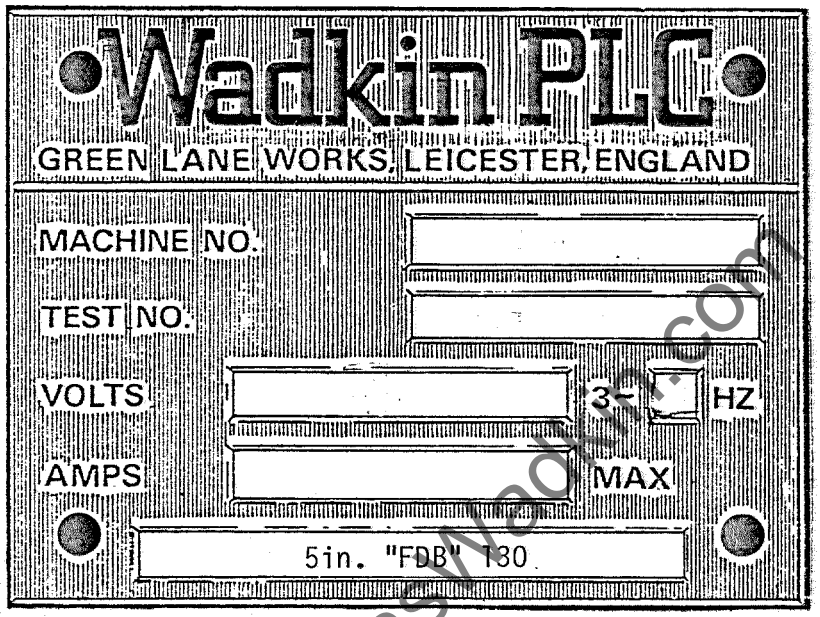
IMPORTANT

IT IS OUR POLICY AND THAT OF OUR SUPPLIERS TO REVIEW CONSTANTLY THE DESIGN AND CAPACITY OF OUR PRODUCTS. WITH THIS IN MIND WE WOULD REMIND OUR CUSTOMERS THAT WHILST THE DIMENSIONS AND PERFORMANCE DATA CONTAINED HEREIN ARE CURRENT AT THE TIME OF GOING TO PRESS, IT IS POSSIBLE THAT, DUE TO THE INCORPORATION OF LATEST DEVELOPMENTS TO ENHANCE PERFORMANCE, DIMENSIONS AND SUPPLIES MAY VARY FROM THOSE ILLUSTRATED.

ALWAYS QUOTE MODEL AND MACHINE NUMBER WHEN ORDERING SPARES

SPARE PARTS

SHOULD SPARE PARTS BE REQUIRED DUE TO BREAKAGE OR WEAR, FULL PARTICULARS INCLUDING MACHINE AND TEST NUMBER MUST BE GIVEN, THIS INFORMATION IS ON THE NAMEPLATE ATTACHED TO THE FRONT OF THE MACHINE AND SHOULD BE FORWARDED TO THE SERVICE MANAGER.



SAMPLE TYPE ORDER

MACHINE
MACHINE NO:
TEST NO:
PARTS REQUIRED

1	-	M10 x 50mm. long screwed stud
1	-	M10 size. bright mild steel washers
1	-	Raising screw

Wadkin PLC., Green Lane Works. Leicester LE5 4PF Telephone: 0533 769111
Cables: Woodworker Leicester
Telex: 34646 (Wadkin Leicester)

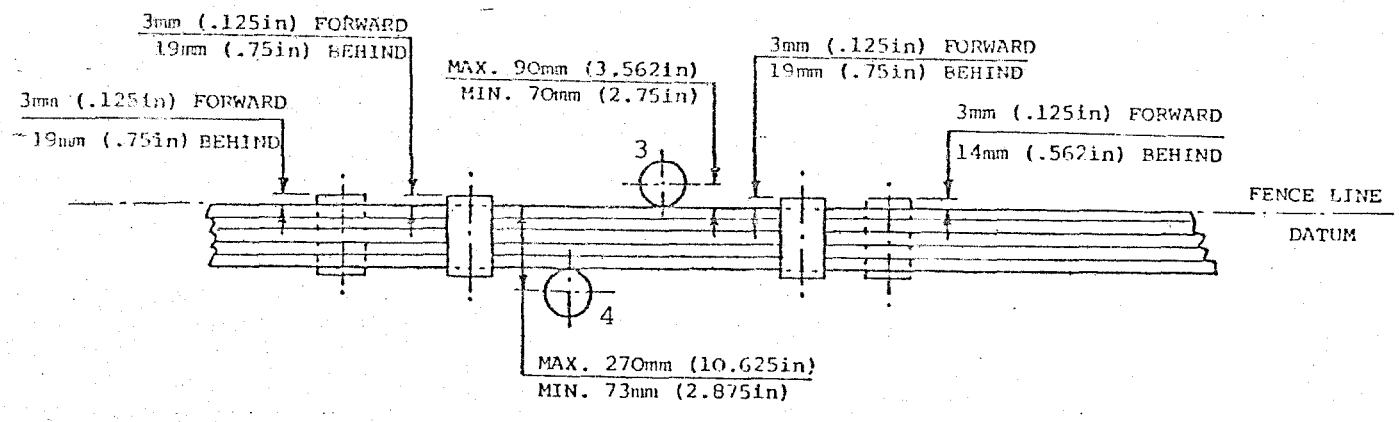
LIST OF CONTENTS

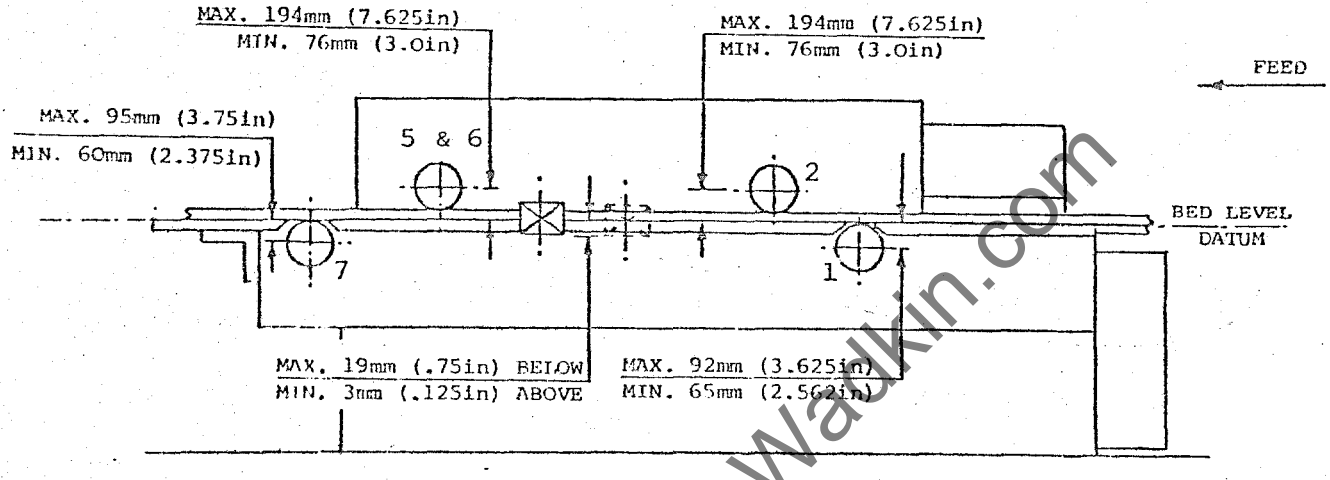
5 in x 4 in FDB 130

PRINCIPAL DIMENSIONS AND CAPACITIES.

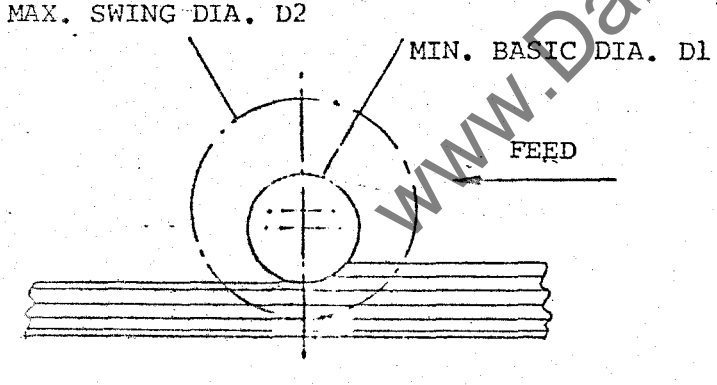
Maximum size of finished work	130 x 75mm. (5in. x 4in.)
Feed speeds via 3 speed gear box and 2 speed motor	9, 14, 18, 23, 33, 45 m/min. 30, 52, 60, 75, 105, 150 ft/min.
Horsepower of feed motor	4.8/2.4 Kw (6.5/3.25 hp) or 5.5/2.75 Kw.(7.1/2/3.75 hp)
Infinitely variable feed unit	6-45 m/min. (20-150 ft/min.)
Horsepower of feed motor	5.5 Kw (7.5 hp) or 7.5 Kw (10hp).
Speed of all main cutter spindles	6000/9000 rpm (7500/9000 rpm on certain heads as specified)
Horsepower of cutter spindle motors:	
Standard all heads	5.5 Kw (7.5 Hp). 7.5 Kw (10hp) to special order
Second bottom head only	11 Kw (15 hp) or 15 Kw (20hp) to special order*
Cutting circles:	
Minimum basic diameter:-	
First bottom head	140mm (5.5 in)
First top head	140mm (5.5 in)
All other heads	120mm (4.75 in)
Maximum basic diameter:-	
First bottom head	178mm (7 in)
First top head	160mm (6.25 in)
Side heads	165mm (6.5in)
Second top head	160mm (6.25 in)
Second bottom head	178mm (7 in)
Maximum swing diameter:-	
First bottom	190mm (7.5 in)
First top	228mm (9 in)
Side heads	216mm (8.5 in)
Second top	228mm (9 in)
Second bottom	254mm (10 in)
Spindle diameter	All heads 40mm
Diameter of feed rolls	152mm (6 in)
Maximum height of machine	1245mm (4ft. 1 in)
Bed height	838mm (2 ft.9 in)

*Note: When 15 Kw (20hp) is specified, the spindle has a single speed of 6000 rpm.





CUTTING CIRCLES



	7		5 and 6		4		3		2		1	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
D1	120	4.75	120	4.75	120	4.75	120	4.75	140	5.5	146	5.75
D2	254	10	228	9	216	8.5	216	8.5	228	9	190	7.5

INSTALLATION

Foundation bolts are not supplied with the machine. If the mill floor consists of 4 in to 6 in solid concrete, no special foundation is necessary. Rag type holding-down bolts may be used. Cut 6in square holes in concrete for bolts. Run in liquid cement when machine has been levelled.

Clean protective coating from bright parts with cloth soaked in paraffin, turpentine, or another solvent.

See foundation drawing supplied separately.

It is essential that the machine is connected to a dust collecting system. The machine has a built-in outlet point for each head.

WIRING DETAILS

The motors and control gear have been wired in before despatch. All that is required is to connect the power supply to the isolating switch. Points to note when connecting to power supply:-

(1) Check the voltage, phase and frequency with those on the machine plate.

(2) Check that the main fuses are of the correct capacity in accordance with the machine name plate

(3) Connect the incoming supply leads to the appropriate terminals.

(4) Check that all connections are sound.

(5) Check that the spindle rotation is correct (start forward feed; from front of machine the top feed rolls should rotate clockwise). Reverse any two of the line lead connections of the incoming supply to reverse rotation.

PNEUMATICS (TO SPECIAL ORDER)

The pneumatic equipment is fitted and tested before despatch. All that is required is to connect an air pipe to the filter unit, located under the front of the feedworks. The regulator on this unit should be set to read 80 p.s.i. on the gauge.

The lubricator on this unit MUST be filled with Mobil Almo No.1 oil.

THE FEEDWORKS

The top feedrolls are adjusted vertically by means of handwheel (1). Where pneumatics are fitted, a cranked handle is supplied in place of the handwheel.

If necessary the spring tension to the top feed rolls can be adjusted by means of locknuts (2) accessible through the lower door.

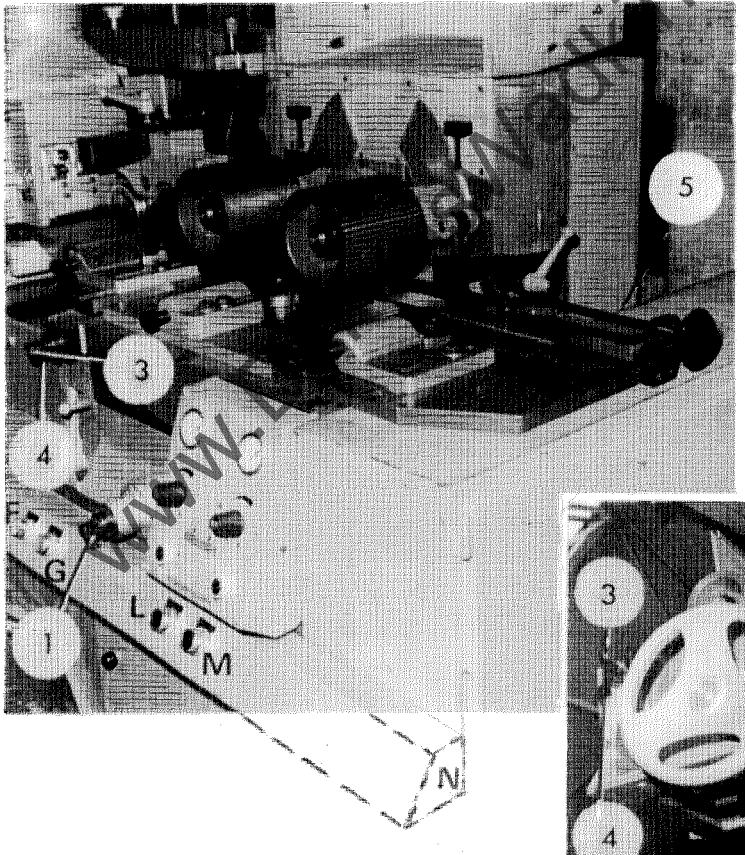
The bottom feedrolls are adjusted vertically by means of a toggle handle (5) between the end of the machine and electrical cabinet, a locking nut is provided at the circular slot.

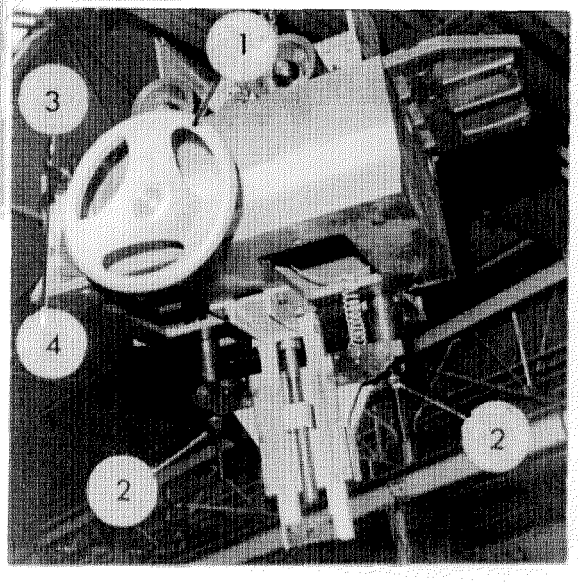
The table before the first bottom head is adjusted vertically by square (3), (4) is the lock for this adjustment.

The feedworks electrical control buttons are as follows:-

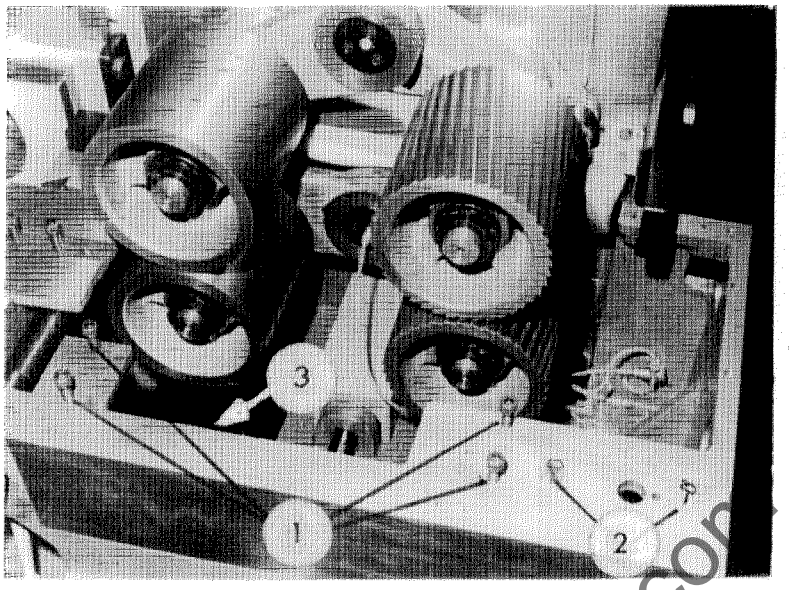
Master stop - (N)
Inch reverse feed - (M)
Inch forward feed - (L)
Stop feed - (G)
Start feed - (F)

See maintenance and lubrication notes.





FEED ROLLS



Feed Rolls must be removed after excessive wear or when it is required to fit different type of rolls. The following types are available.

1. Knurled chrome - for Hardwood Mouldings.
2. Fluted for normal dutywork. For heavy duty work a second fluted roll may be fitted in the second top roll position.
3. Polyurethane coated for pre-machined work.
4. Plain for general purpose work. These are normally fitted in second top and second bottom positions.

TO REMOVE TOP FEEDROLLS

Release tab washers and remove notch nuts.
Remove Feedrolls.

TO REMOVE BOTTOM FEEDROLLS.

Remove table section between the bottom feed rolls (four cap head screws) (1).
Remove the two cap head screws on infeed table section (fastening to the front apron) (2).
Remove the three cap head screws fixing the front apron to the main frame (3).
Draw the front apron section clear of the machine frame.
NOTE: Where pneumatics are fitted, draw the apron section away from the main frame and support, taking care not to damage the connecting pipework and cable.

Release tab washers and remove notch nuts from the lower feed rolls.
Remove feedrolls.

To fit new rolls reverse the procedure.

PNEUMATICALLY CONTROLLED FEED ROLLS

The Top Rolls (1) must be set relative to the thickness of the timber (2) by lowering the rolls by depressing button (3). The amount of vertical travel should be sufficient to moderately hold the workpiece in position. At this stage the workpiece should be withdrawn. Following which further vertical adjustment to the top rolls should be made by means of Handwheel or Crank Handle (4). The adjustment should be such that the rolls take up a position which represents approximately 6mm (0.25 ins.) less than the thickness of the work piece.

Pneumatic Operation:- The input pressure should be set to 5.7 Kg/cm^3 (80 lbs./sq. in.)

To lower the Top Rolls depress button (4)

To Raise the Top Rolls depress button (5) or either of the electrical master stop buttons.

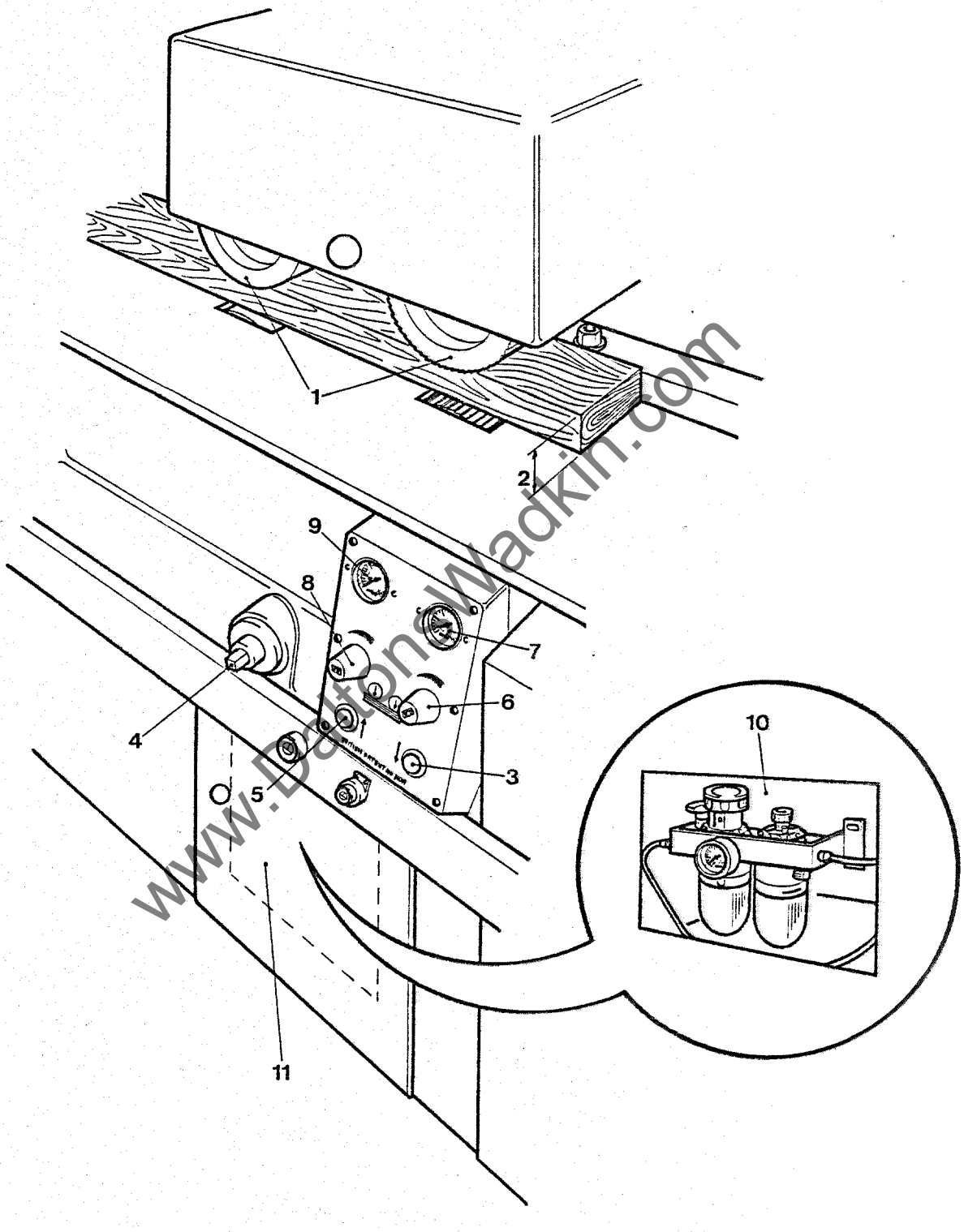
The amount of pressure each top roll exerts on the timber should be such that the traction is sufficient without defacing the timber. Each roll is independently controlled. To increase the pressure to the infeed roll turn knob (6) counter clockwise. The amount of pressure applied is registered on gauge (7). Knob (8) and gauge (9) similarly control the second top roll.

IMPORTANT.

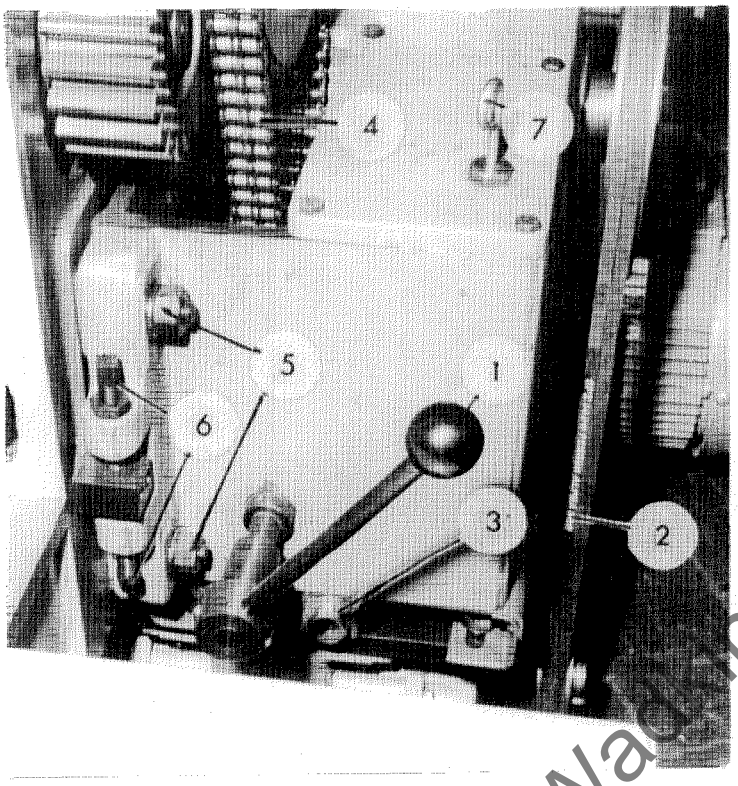
IF WORKING CONDITIONS DEMAND INCREASED TRACTION, INCREASE THE AIR PRESSURE AT THE REGULATORS (6) and (8) OR IF THE AIR SUPPLY HAS SUFFICIENT RESOURCES INCREASE THE PRESSURE AT THE FILTER REGULATOR UNIT (10), LOCATED THROUGH DOOR (11). UNDER NO CIRCUMSTANCES SHOULD TRACTION BE INCREASED BY THE VERTICAL ADJUSTMENT OF THE ROLLS BY MEANS OF THE CRANK HANDLE OR HANDWHEEL (4).

FAILURE TO OBSERVE THIS PRECAUTION WILL PRECIPITATE MECHANICAL DAMAGE TO THE FEED ROLLS DRIVE.

AT THE INITIAL STARTING OF THE FEED ROLLS A FINE MIST OF OIL SHOULD BE ADDED TO THE AIR SUPPLY BY OPENING THE REGULATING SCREW ON THE FILTER REGULATOR OILER UNIT (10) FOR A BRIEF PERIOD BUT NOT LONGER THAN FIVE MINUTES. IT WILL BE NECESSARY TO REPEAT THIS PROCESS AT INTERVALS OF TWO WEEKS



PNEUMATICALLY CONTROLLED FEED ROLLS



F/MIN		M/MIN
30	I C	9.1
52	I A	16.1
60	II C	18.3
85	I B	22.8
105	II A	31.8
150	II B	45.6

THE SIX SPEED GEARBOX DRIVE

The feed speed plate is located near to the gear change lever (1)

Speeds are selected by means of a three position gear change lever (1). and a two speed motor switch located at the rear of the electrical cabinet. FEED MUST BE STOPPED BEFORE CHANGING SPEED.

If necessary the drive belts (2) may be tensioned by means of the adjusting bolt at the Kenyon motor mounting baseplate (3).

The chain drive (4) may be tensioned by slacking off pivot bolt to the right of the gearbox and two nuts (5) and adjusting, jackscrews (6).

The gearbox is provided with an oil filler plug/dipstick (7) and drain plug lower right corner, (see lubrication instructions).

The rear cover guard is held in position by two nuts, one at either side.

HYDRAULIC DRIVE, FEED GEARBOX.

A variable speed hydraulic gearbox, belt driven from a pick-a-back motor is mounted on a bed plate at the rear of the machine feedworks.

A lever operated speed change mechanism affords feed speeds of 6 to 45 m/min. This lever is situated on right hand side of the feedworks gearbox.

Belt tensioning of the driving motor is achieved by raising the motor mounting via the threaded studs and locking nuts.
The Hydraulic Drive consists of a power driven hydraulic pump, supplying oil to a hydraulic motor. Both are housed in a common casing which also serves as an oil reservoir. The pump and hydraulic motor are vane-type units with a variable working space in which the rotor housing is free to rotate together with the vanes, the rotor and the driving oil.

Method of operation.
The Hydraulic Drive operates in a closed circuit. The driven pump draws in oil from the hydraulic motor and the oil reservoir and delivers it under pressure to the hydraulic motor, so that the latter in turn is driven. With a constant input speed, the output speed depends on the ratio between the volume of the oil of the pump and the volume of the oil of the hydraulic motor.

Oil Filling.
The drive is delivered with oil. Before starting open the oil filler plug and check that the oil level is correct. If it is not correct, fill with oil until the oil level stays visible in the opening of the oil filler. After starting, the pump and hydraulic motor draws oil from the reservoir, causing the oil level to subside, add more oil until the oil level again reaches the opening of the oil filler.
Regularly check the oil level.

Temporary idling at 'zero' adjustment (output shaft no-speed) is harmless However, the automatic lubrication depends upon a certain amount of pressure i.e. a load on the drive. Therefore, running without a load for more than 10 to 15 minutes should be avoided. If the driven machine requires extremely long idling periods, especially with the output shaft of the drive running, it is advisable to consult the manufacturers.

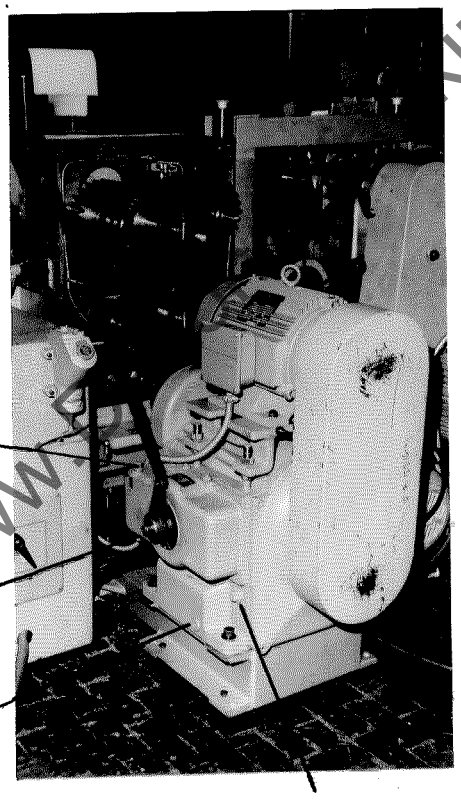
Oil change and maintenance.
First oil change should be made after 500 running hours and subsequently after every 2000 running hours, in any case at least every six months. It is not sufficient merely to add some oil. The oil must be drained completely At the same time the housing of the drive must be rinsed out with a small quantity of fresh warm oil of the recommended grade. After carefully draining the rinsing oil, refill completely with fresh oil.

Change the oil simultaneously at the encased auxiliary attachments, mounted to the drive housing. Use the same oil as for the drive. The other encased adjustment members not mounted to the drive housing should be lubricated with a few charges of oil. Except for an occasional checking of the oil and external cleaning, no additional measures are necessary.

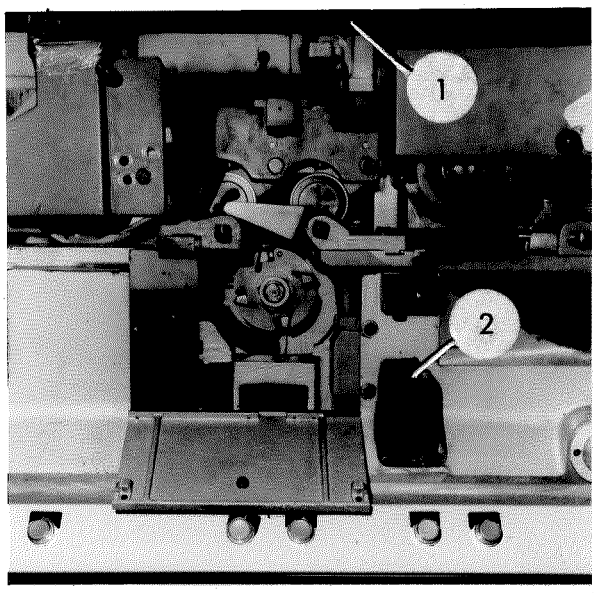
For the Boehringer-Sturm Hydraulic Drive Model 3046ZK any of the following oil grades may be used.

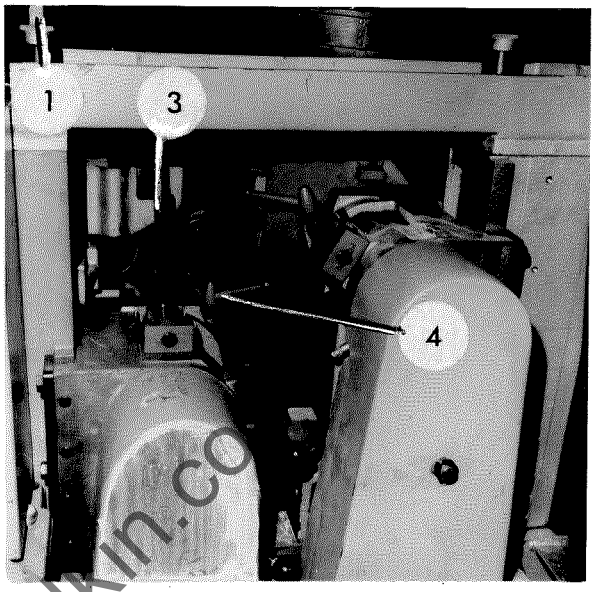
Aral Oil Hty.	Aral AG
BP Energol HLP 100	BP Ltd.,
Texaco Regal Oil PC R & O.	Texaco-Caltex.
Esso Nuto H-54	Esso Standard
Misola CH	Antar
Mobil D.T.E. Oil Heavy	Mobil Oil Ltd.
Shell Turbo Oil 37	Shell
Sunvis 941	Sun Oil Company
Valvoline Turbine Oil No.35	Freedom-Valvoline Oil Comp.

Oil Change: Volume - 14 Litres (21 pints) approximately.
Motor Drive Belts - 3 Fenner SPZ 1140



FIRST BOTTOM HEAD





Vertical adjustment of the first bottom head is made by applying a crank handle to the square (1). Locking lever (2) is the lock for this movement.

Horizontal adjustment is made by means of ratchet handle (3). Locking lever (4) is the lock for this movement.

TOP HEAD AND CHIPBREAKER

Vertical adjustment of the top head is made by applying a crank handle to the square (1). Nut (2) is the lock for this movement.

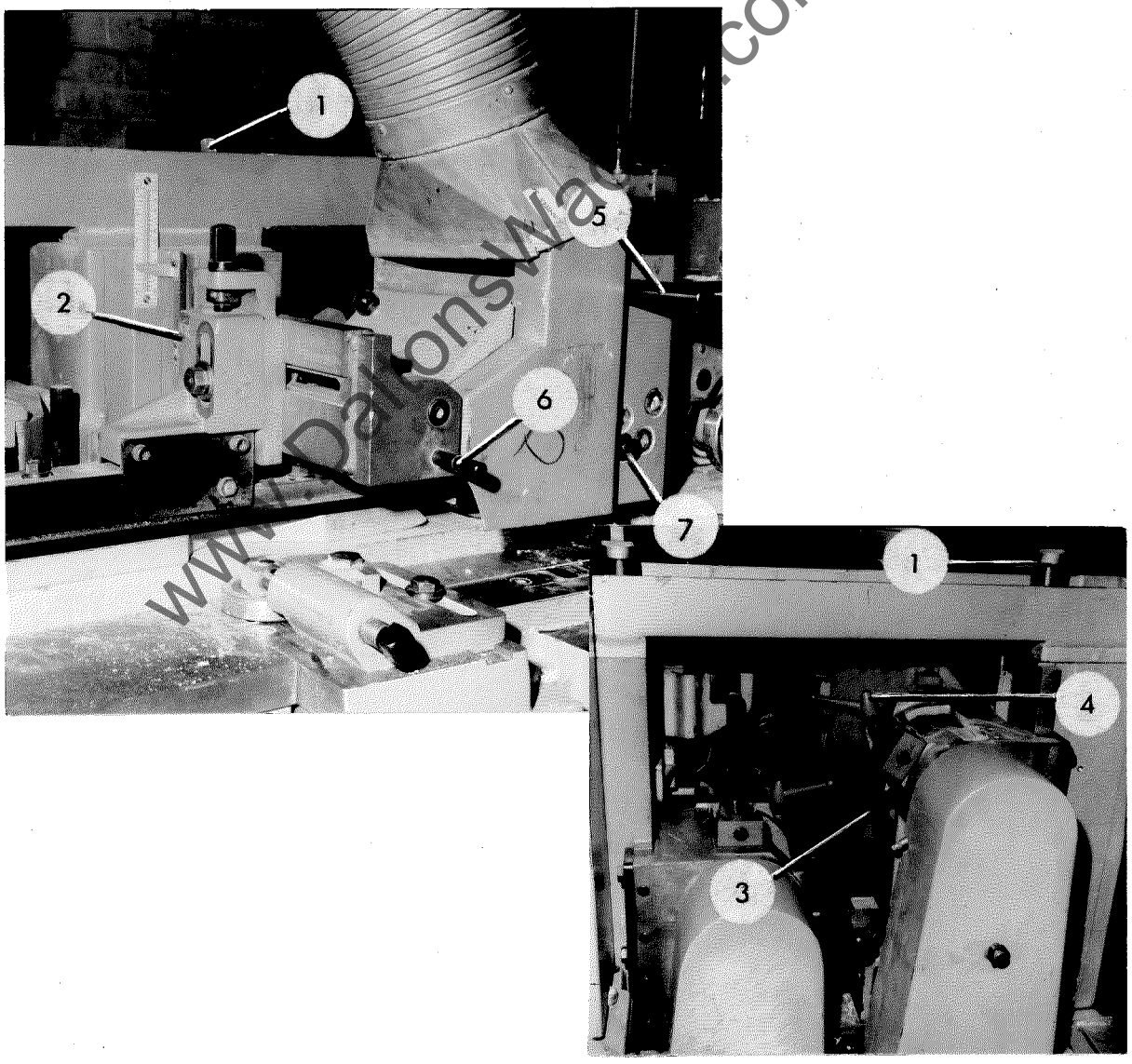
Horizontal adjustment is made by ratchet handle (3). Locking lever (4) is the lock for this movement.

The chipbreaker hood can be swung back for access to the cutterblock by lifting handle (5). The hood is held back by pushing in shaft (6).

The chipbreaker may be set in one of four positions (relative to hood) for different cutterblock diameters. Stud (7) locks the chipbreaker in position.

The chipbreaker hood may be adjusted in the vertical from a stud and locking 'nut' at the rear of the chipbreaker.

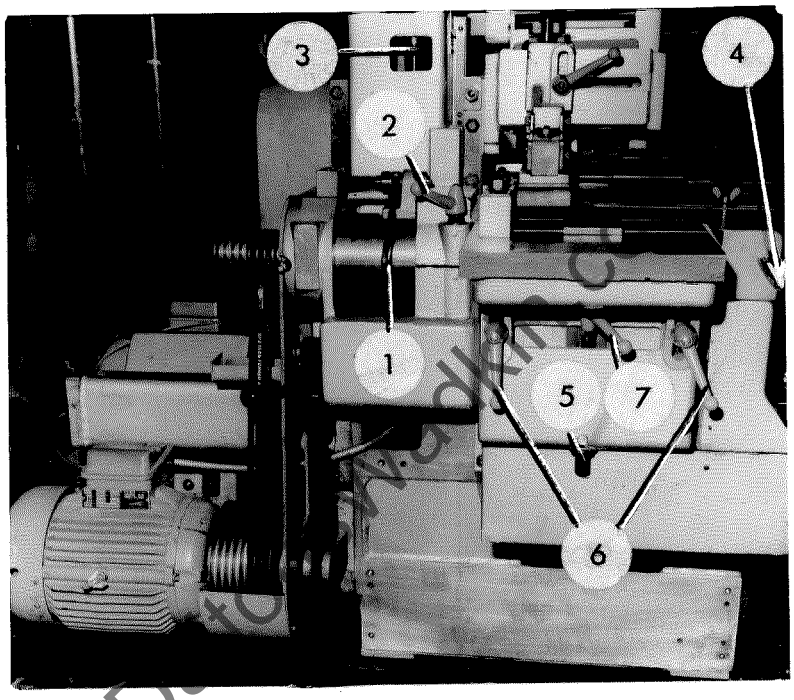
Chipbreaker shoes are independently spring loaded.



SECOND BOTTOM HEAD

Horizontal adjustment of the second bottom head is made by ratchet handle (1). Locking lever (2) is the lock for this movement.

Vertical adjustment of the bottom head is made by applying a crank handle to square (3). Locking lever (4) is the lock for this movement. (Similar adjustment to the first bottom head).



THE OUTFEED TABLE

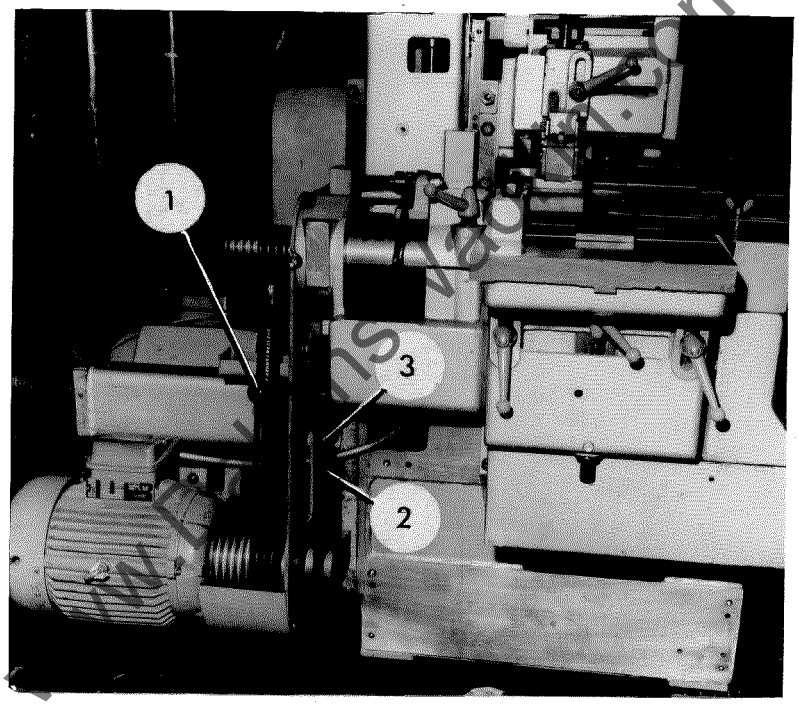
Vertical movement of the outfeed table is made by applying a loose ratchet handle to the square (5). The two locking levers (6) lock the table slide in position.

The bedplate on the outfeed table may be moved out to accommodate larger cutting circles by releasing locking handle (7) and sliding the bedplate by hand.

HORIZONTAL HEAD DRIVES (BELT)

To change speed, lift handle (1). This raises the motor and allows belts to be changed. Lower handle back to original position after changing speed.

To tension belts, rotate turnbuckle (2). This is locked with locknut (3).



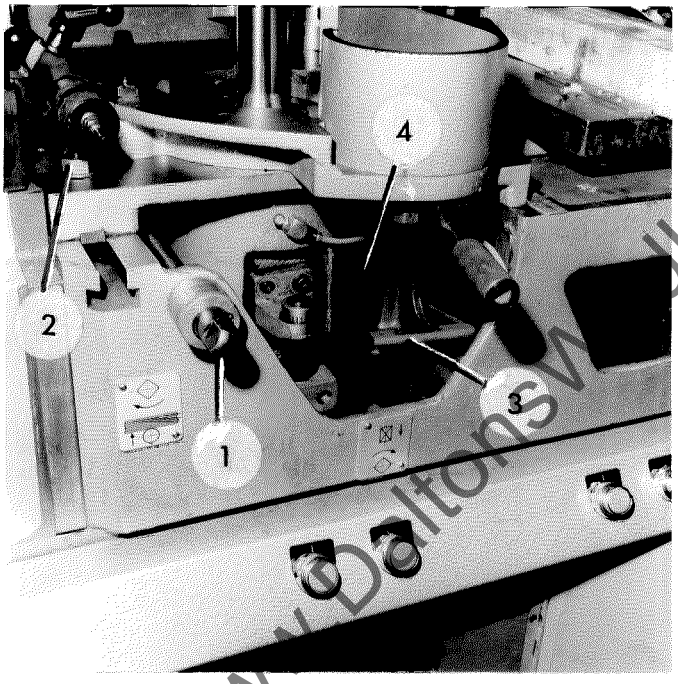
SIDE HEADS

NEAR SIDE HEAD

Horizontal adjustment of near side head is made by means of a crank handle on the square (1). Nut (2) is the lock for this movement.

Vertical adjustment of near side head is made by means of a ratchet handle (3). Nut (4) is the lock for this movement.

The bedplate may be adjusted to allow for larger cutting circles by slackening off two locking handles (5) (underneath the carriage) and sliding plate by hand.

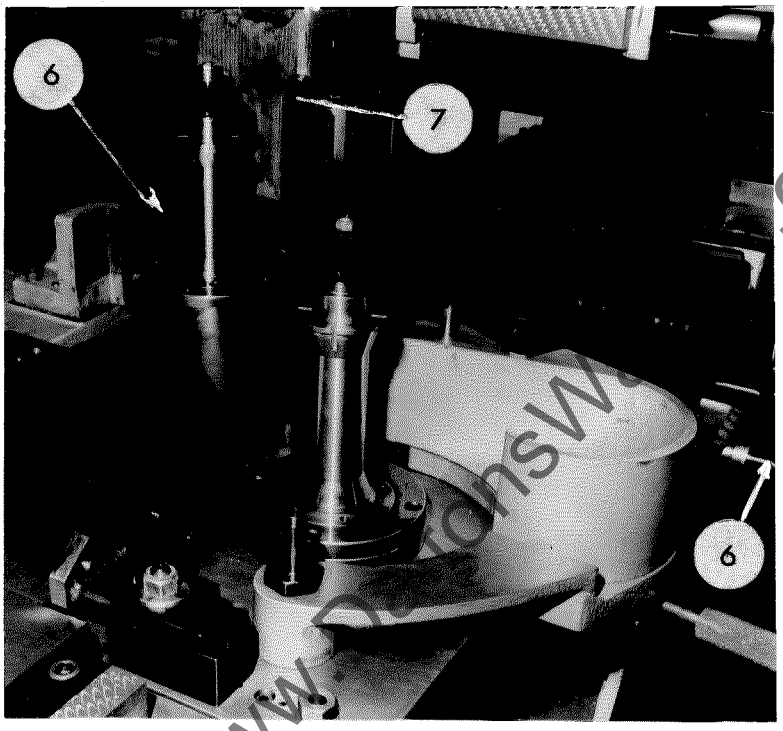


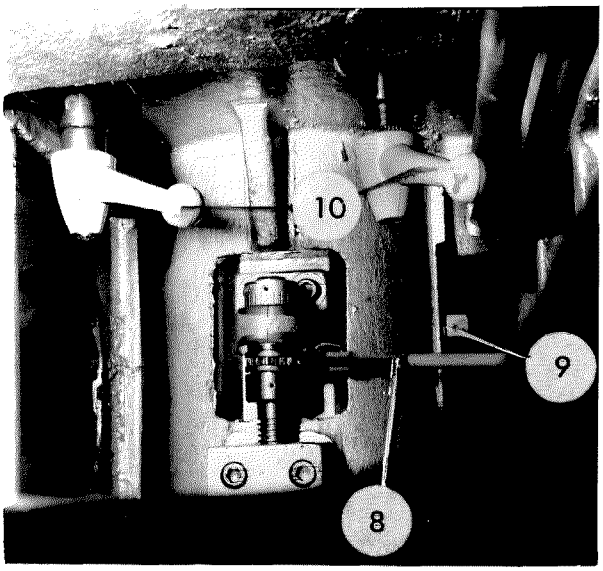
FENCE SIDE HEAD

Horizontal adjustment of fence side head is made by applying a crank handle to square (6) at front or rear of machine. Nut (7) is the lock for this movement.

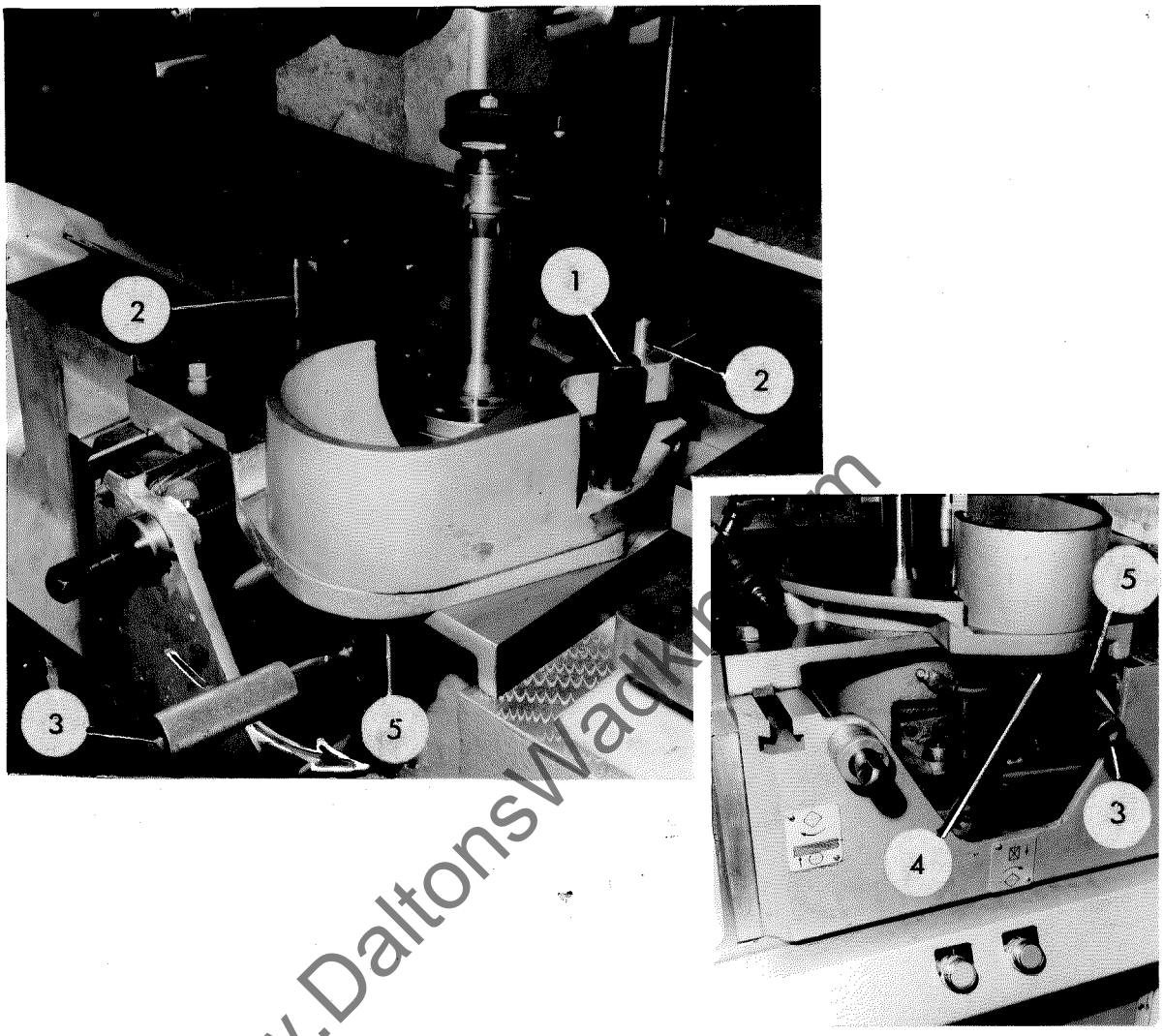
Vertical adjustment of fence side head is made by means of a ratchet handle (8). Nut (9) is the lock for this movement.

The bed plate may be adjusted to allow for larger cutting circles by slackening off two locking handles (10) (underneath the carriage) and sliding plate by hand.





NEAR SIDE HEAD CHIP BREAKER



The chipbreaker may be set in one of two positions, to allow for different cutting circle diameters, by repositioning locking screw (1).

The dust hood is removed by lifting from locating pins (2).

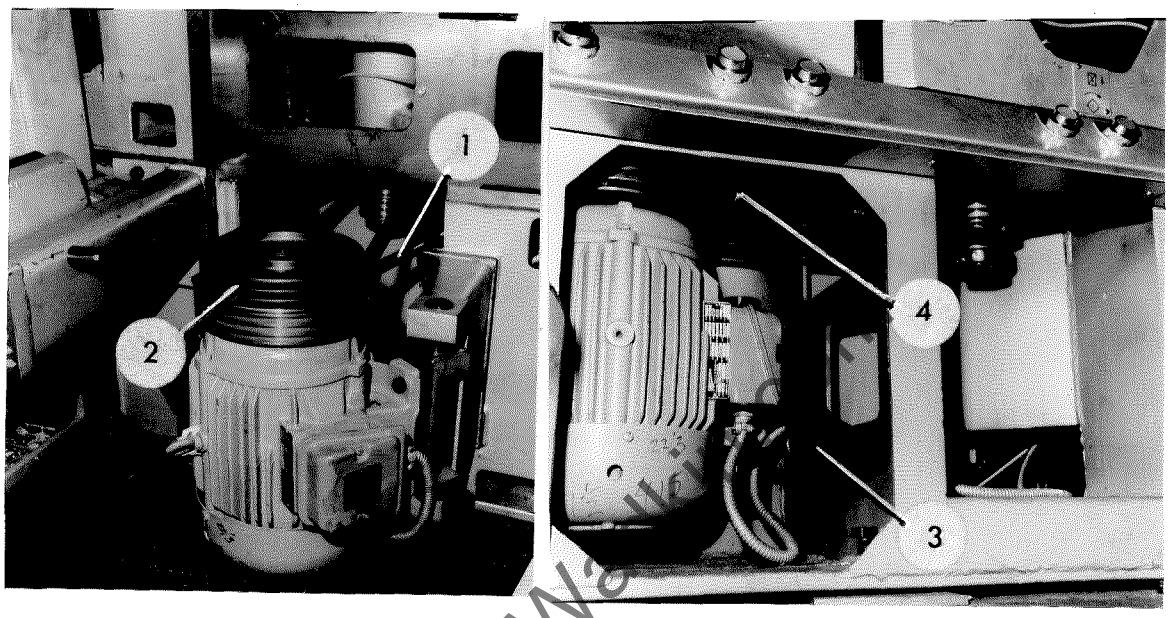
Handle (3) can be swung sideways, (in the direction of arrow) by releasing nut (4). This allows the chipbreaker mechanism to be swung clear of the block.

No adjustment to spring pressure is required, releasing locknut (5) enables adjustment of the chipbreaker position to be made by knurled handle (3)

SIDE HEAD DRIVES (BELT)

FENCE SIDE HEAD DRIVE

To change speed (or replace belts), remove cover, release tension via square (1), change belts (2) and re-tension.



NEAR SIDE HEAD DRIVE.

Access to near side head belts is through doors at front of machine. To change speed (or replace belts), release tension by means of knob (3), change belts (4) and re-tension.

PRESSURE ARRANGEMENTS

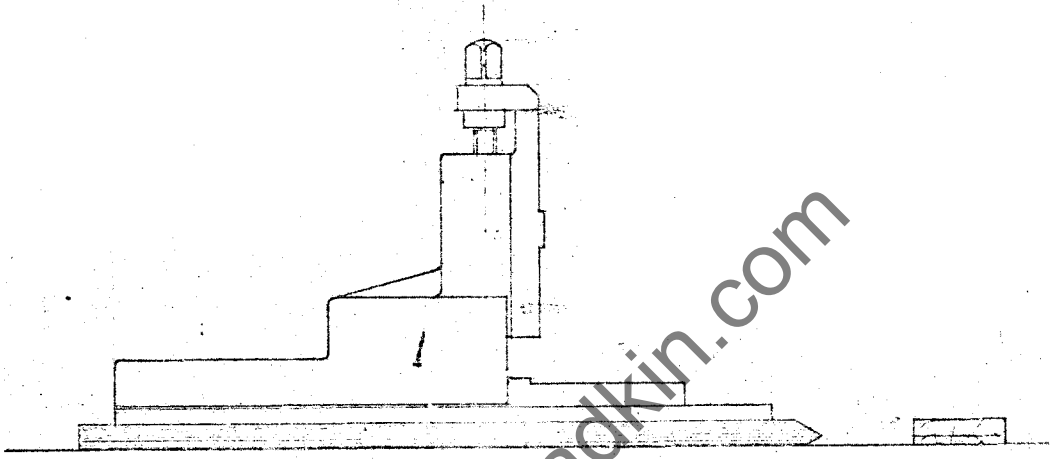
5 in. FDB PRESSURE FORMAT

	MODEL							
	51 51U	52 52U	53 53U	54 54U	55 55U	56 56U	57 57U	58 58U
TYPE REQUIRED	FORMAT PAGE							
Standard Pressures	1		1 and 6		11		11 and 16	
Short Stock	2		2 and 7		12		12 and 17	
Narrow Stock	3		8		13		13 and 18	
Thin Stock	4		4 and 9		14		14 and 19	
Optional Pressures	5		10		15		15 and 20	
Universal Hd. STD. Press.	91	93	91	93	91	93	91	93
Universal Hd. Narrow Stock	92	94	92	94	92	94	92	94

To use the format table above , select the type of pressure required under the machine model column - with cross reference to the TYPE REQUIRED, extract the FORMAT PAGE number. Refer to this page and confirm the pressure arrangement. This arrangement will reference back to the style of pressure required.

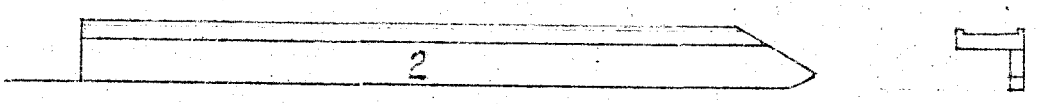
WIDE PAD PRESSURE Pressure Unit No. 1

Notes:
This pressure unit is supplied fitted with a wooden pad. On moulded work shaped pads may be fitted to give greater control.On narrow work it may be necessary to fit stepped pads in order to clear the side pressures This is indicated on the pressure arrangement pages. This pressure incorporates flexible rubber bushes and should not be "wound" down until solid.
Note: Pressure (2) eliminates the need for stepped shoes.



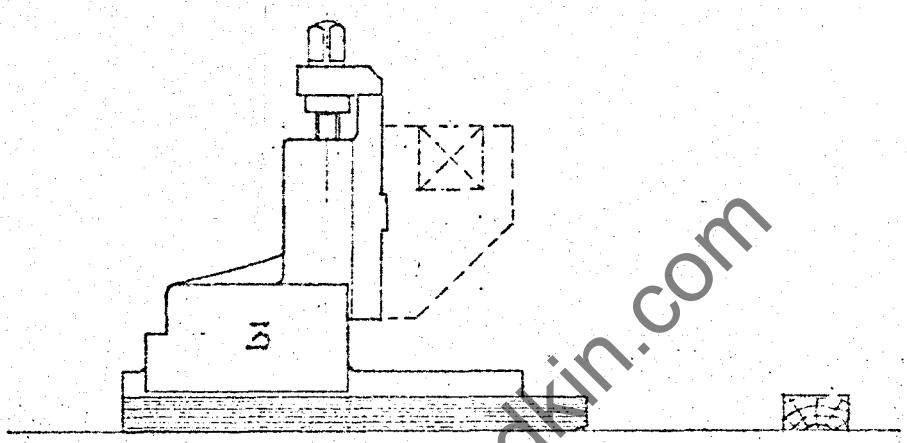
PRESSURE SHOE FOR NARROW STOCK Pressure Unit No.2

Notes:
Shoe may be attached to Pressure No.1 to eliminate the need for stepped wooden pads on narrow stock.



SHORT WIDE PAD PRESSURES Pressure Unit No.3

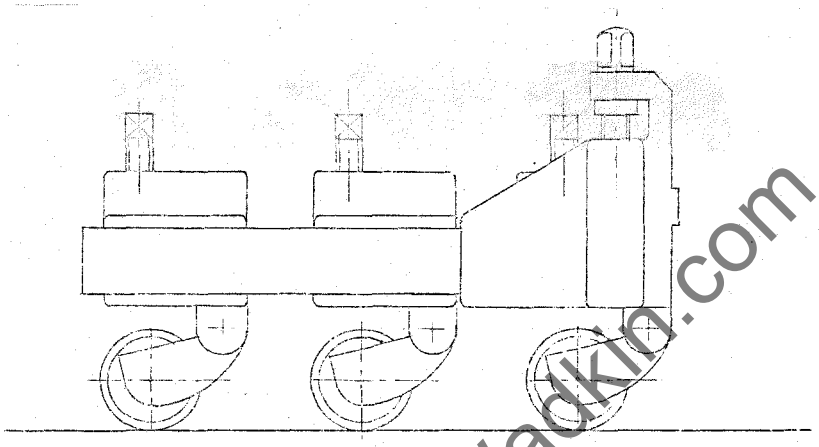
Notes:
This pressure is supplied fitted with a wooden pad
On moulded work shaped pads may be fitted to give greater control.
On narrow work it may be necessary to fit stepped pads in order to clear the side pressures. This is indicated on the pressure arrangement pages.
Note: In some cases pressure (4) eliminates the need for stepped shoes.



MULTIPLE TOP ROLLER PRESSURE

Pressure unit No.5

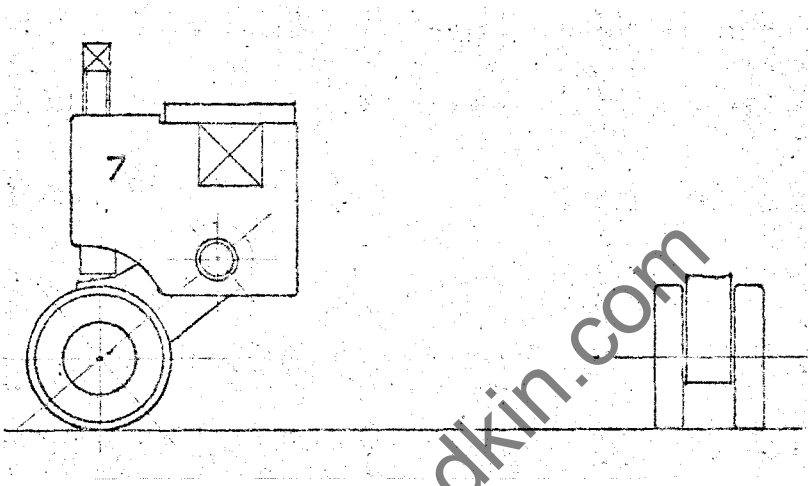
Notes:
This pressure is used after a top head in place of pad pressure (1). It can also be used as a double roller unit in conjunction with pad pressure (3) where greater control of the timber is required on leaving the cutterblock.



Later Model

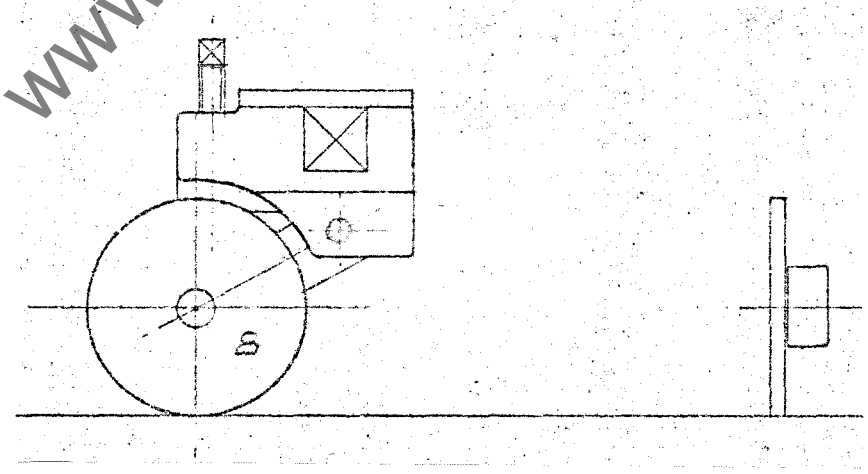
WIDE ROLLER PRESSURE - SINGLE UNIT Pressure Unit No. 7

Notes:
Normally used for wider material.
The front roll may be removed (2 capscrews) when used on narrower material.
See Pressure Arrangement pages for details.



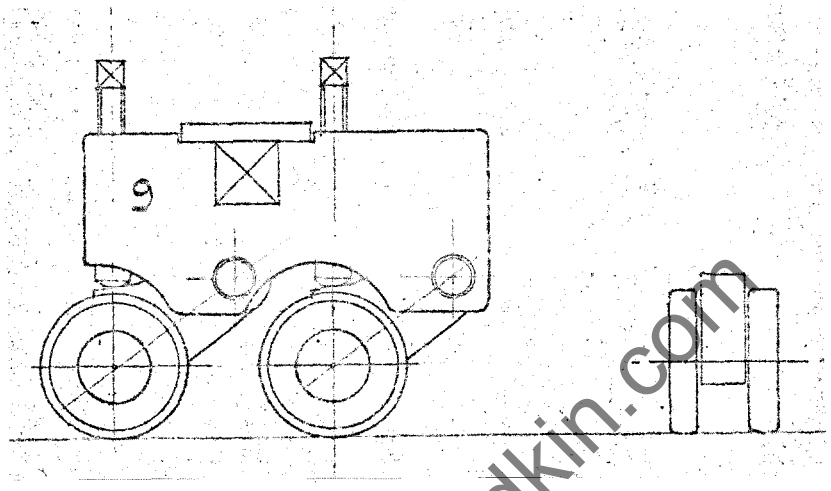
NARROW ROLLER PRESSURE Pressure Unit No.8

Notes:
Used for narrow stock opposite to near side head on machines with 12 in. stagger side heads.



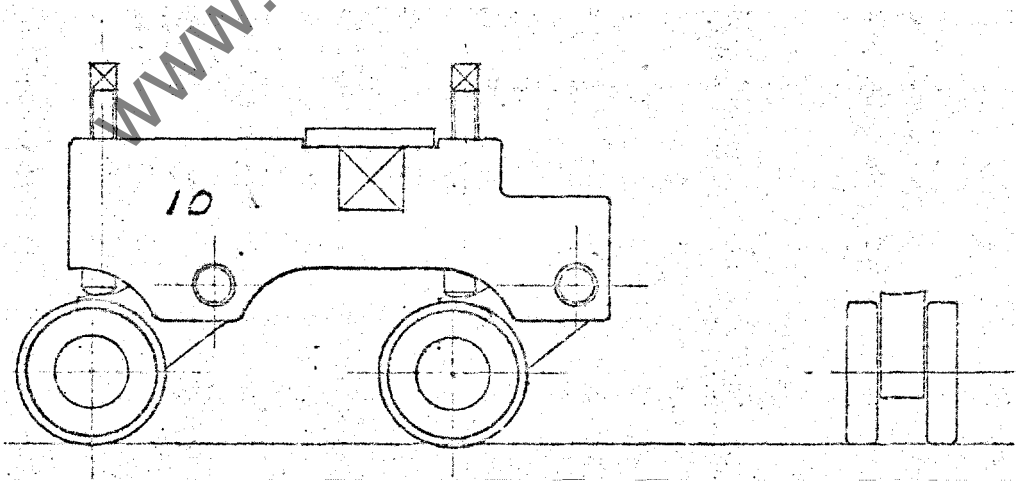
WIDE ROLLER PRESSURE - DOUBLE UNIT Pressure unit No.9

Notes:
Normally used for wider material.
The front rolls may be removed (2 capscrews) when used on narrower material - see pressure arrangement pages for details.



WIDE ROLLER PRESSURE - LONG DOUBLE UNIT Pressure unit No. 10

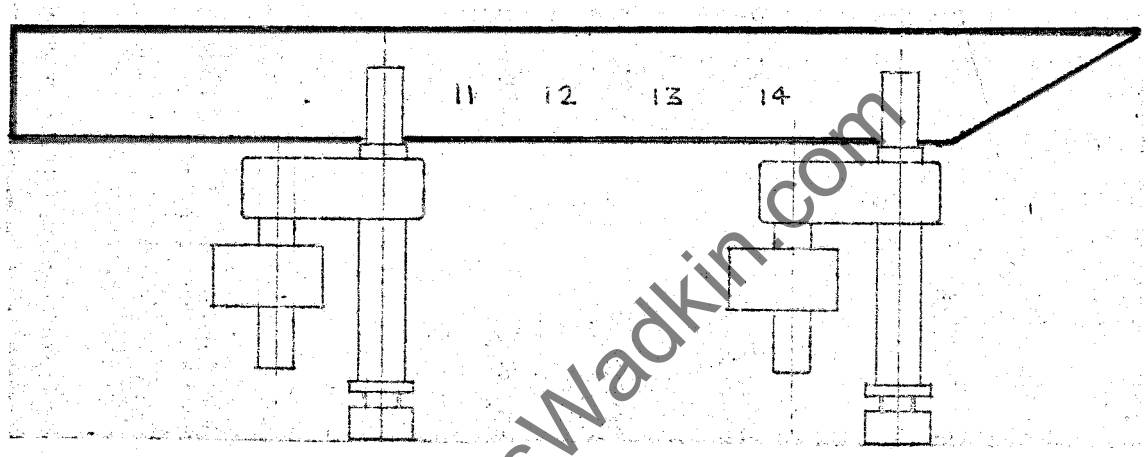
Notes:
Front rollers may be removed (2 capscrews) in order to run narrow stock - see pressure arrangement pages for details.



SHALLOW FRONT FENCE

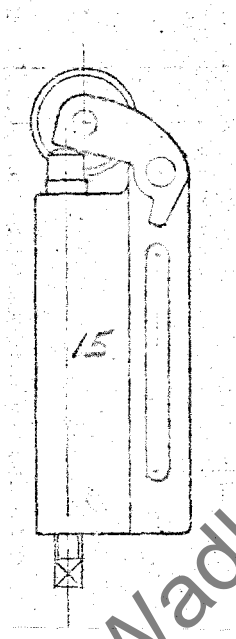
Pressure Unit No. 11,12,13 and 14.

Notes:
Numbers 11, 12, 13 and 14 refer to shallow front fences of different lengths to suit various models.
This unit is adjustable in height to suit work which is moulded on the front edge.
Wooden shoes may be fitted if required.



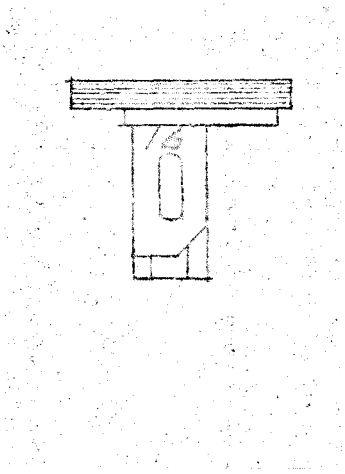
SIDE ROLLER PRESSURE Pressure unit No.15

Notes:
Standard side roller pressure unit as fitted to all machines.
Extra units may be fitted for short stock



SIDE PAD PRESSURE AFTER NEAR SIDE HEAD Pressure Unit No.16

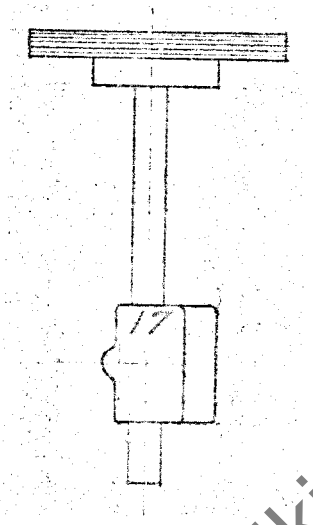
Notes:
Used on machines with 12in. stagger side heads.
Shaped wooden pad may be fitted for moulded work.
Long pad may be fitted for short stock.



SIDE PAD PRESSURE

Pressure unit No. 17

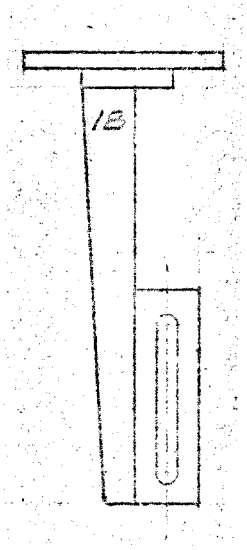
Notes:
Shaped wooden pad may be fitted for moulded work.
Long pad may be fitted for short stock.



TOP GUIDE FOR THIN STOCK

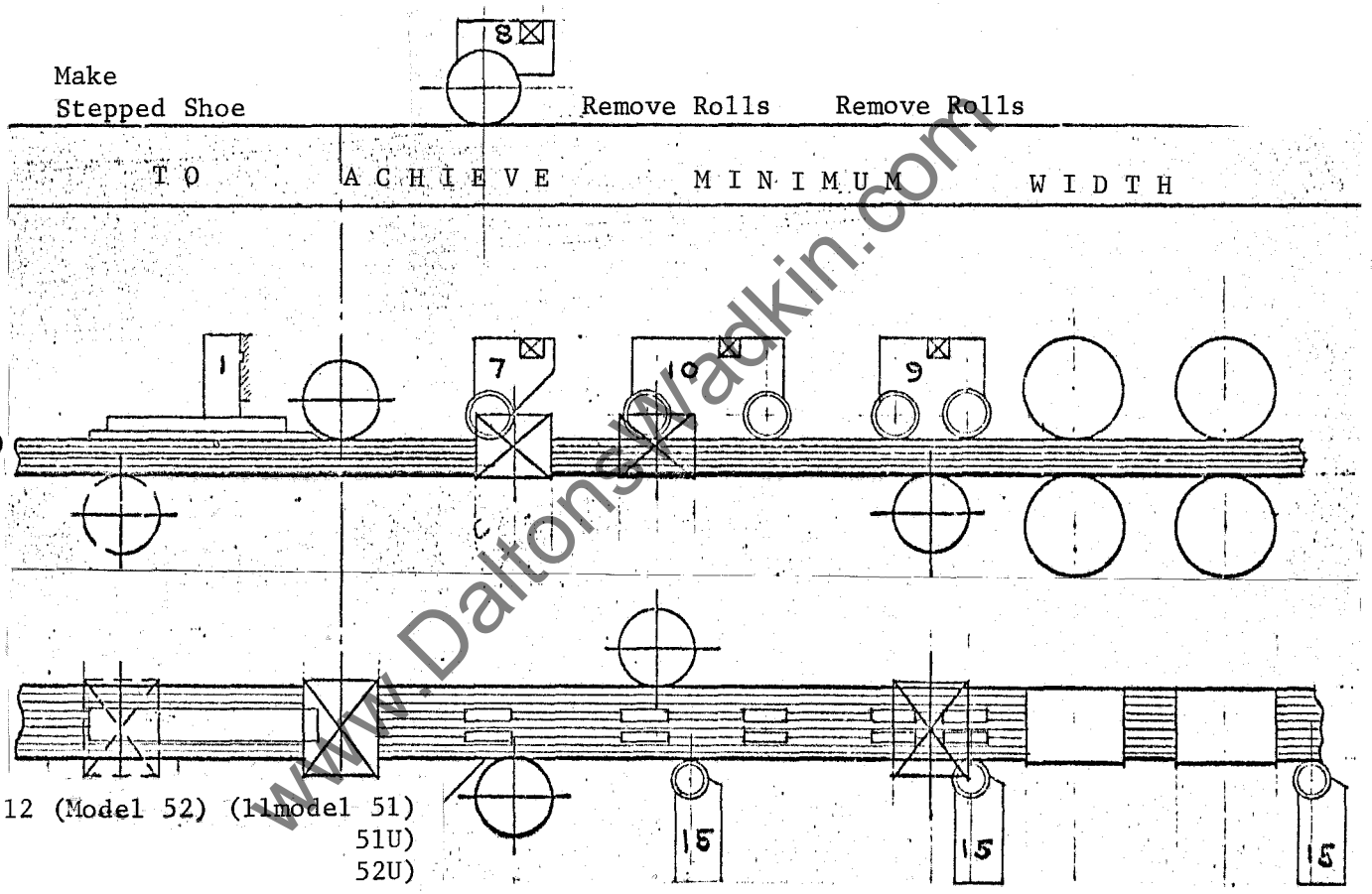
Pressure unit No. 18

This unit is always used mounted on side roller pressure (15).
This unit is intended as a guide only and should be set clear of timber.
Wooden guides may be fitted in place of the steel shoe if required.



MODELS:
51, 52
51U, 52U

Common to models 53, 54
53U, 54U.



MINIMUM WIDTH =
11mm (7/16in)

MINIMUM THICK-
NESS = 9mm (3/8in)

MINIMUM LENGTH =
600 mm (24in)

MODELS 51U. See also Page 47 - Model 52U See also 49

CAPACITY

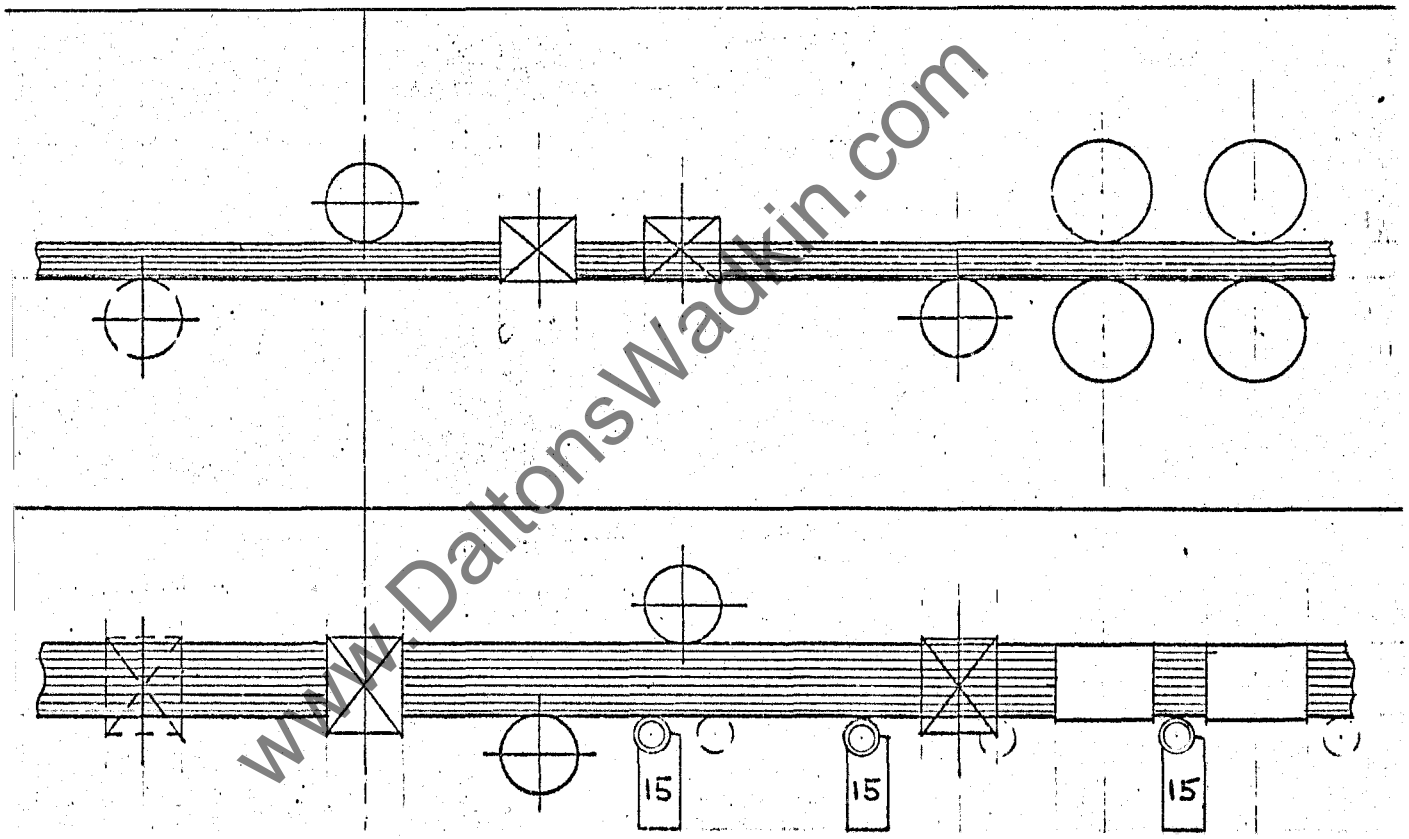
SHORT STOCK PRESSURES to special order

5 in. FDB 130

COMMON TO MODELS 53 54
53U 54U

MODELS:
51, 52
51U, 52U

MINIMUM LENGTH
= 350mm (14in)



CAPACITY

MODELS:
51 52
51U 52U

NARROW STOCK PRESSURES to special order

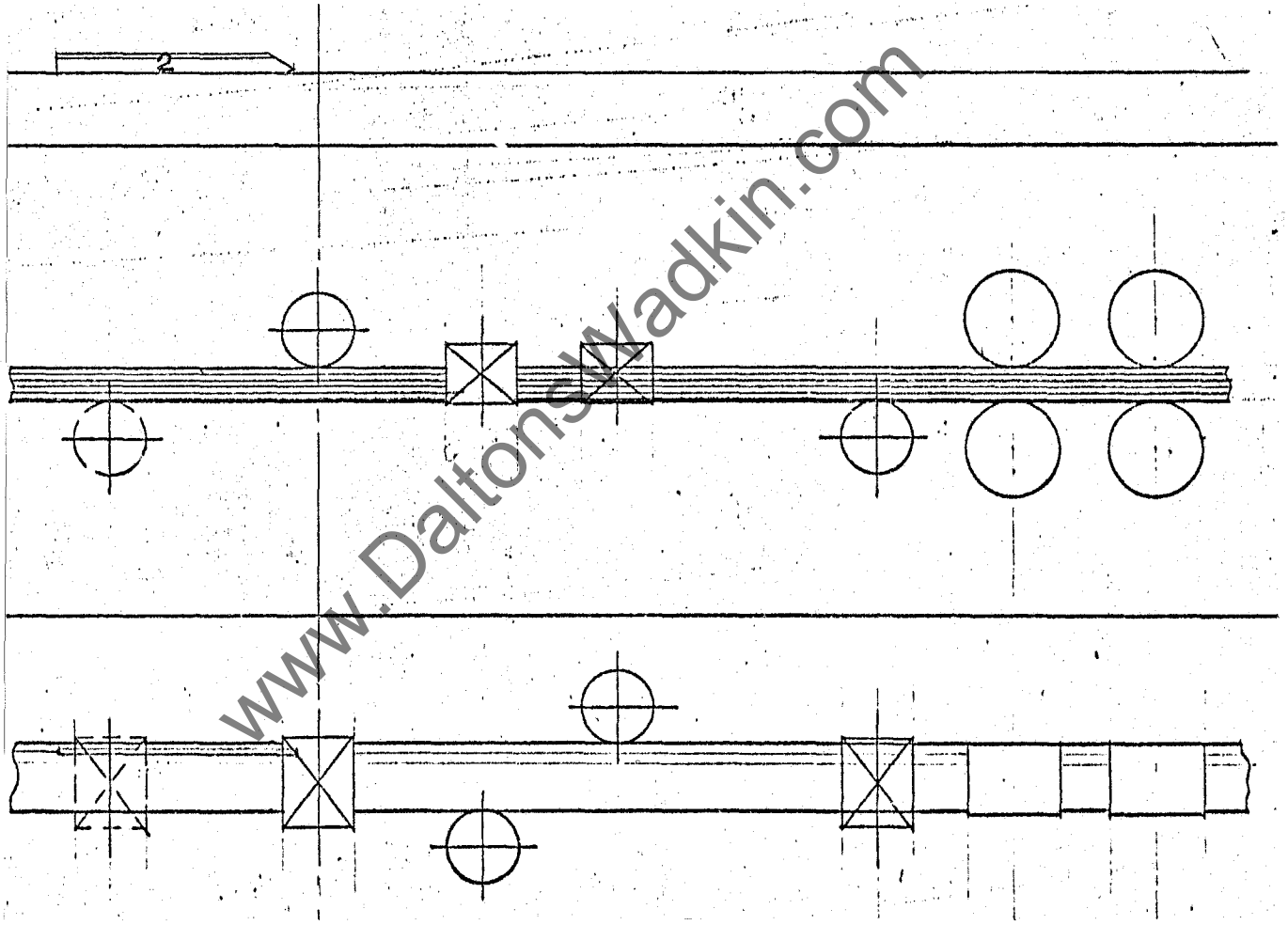
5 in. FDB 130

COMMON TO MODELS 53 54
53U 54U

MINIMUM WIDTH

= 11mm (7/16 in)

NOTE: This shoe does not reduce the minimum width but eliminates the need to make special stepped wooden pads.



MODEL 51U SEE ALSO P.48 MODEL 52U SEE ALSO P.50

CAPACITY

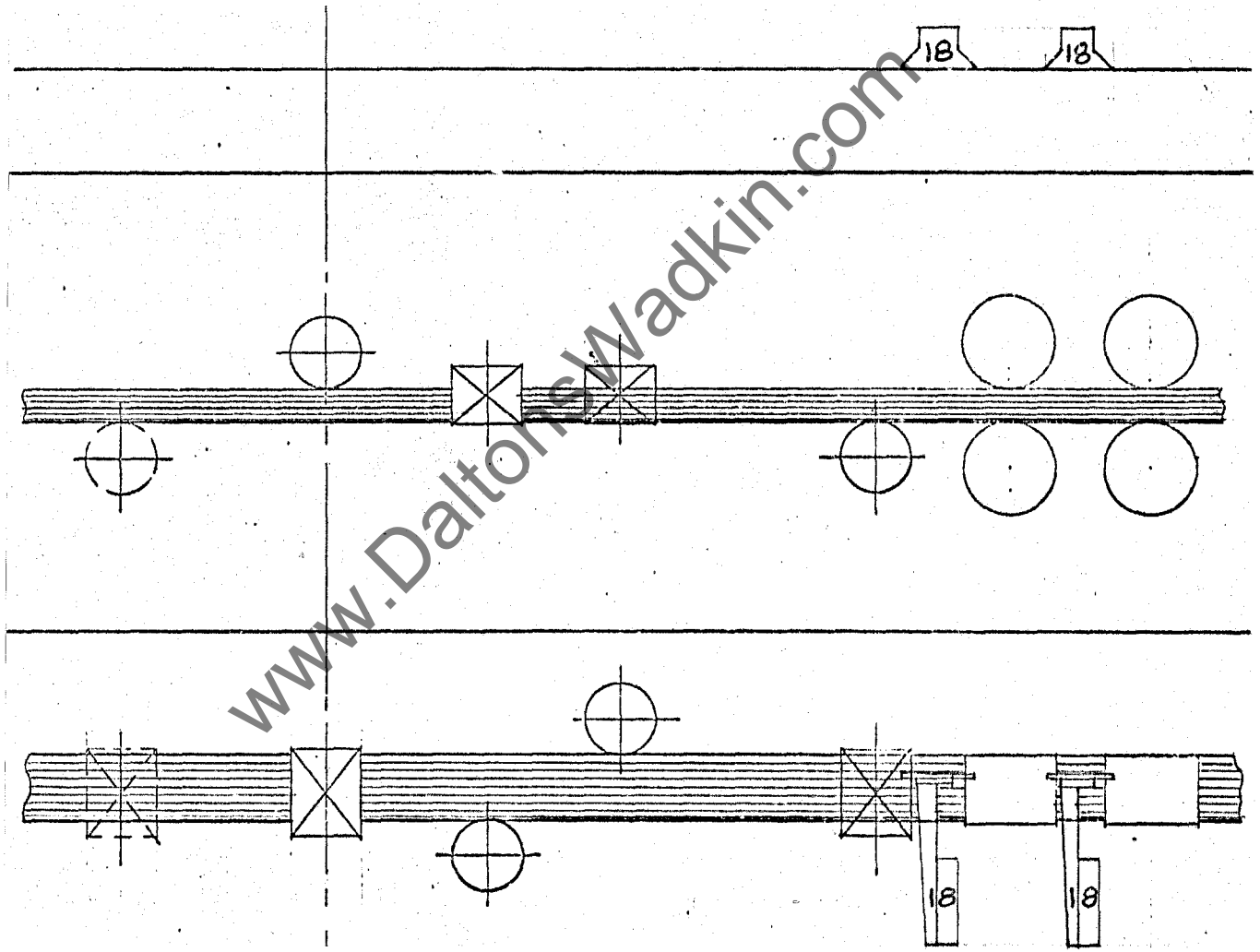
THIN STOCK PRESSURES to special order

5 in. FDB 130

MODELS:
51 52
51U 52U

COMMON TO MODELS 53 54
53U 54U

MINIMUM
THICKNESS
= 6mm (1/4in)



CAPACITY

MODELS:

51 52

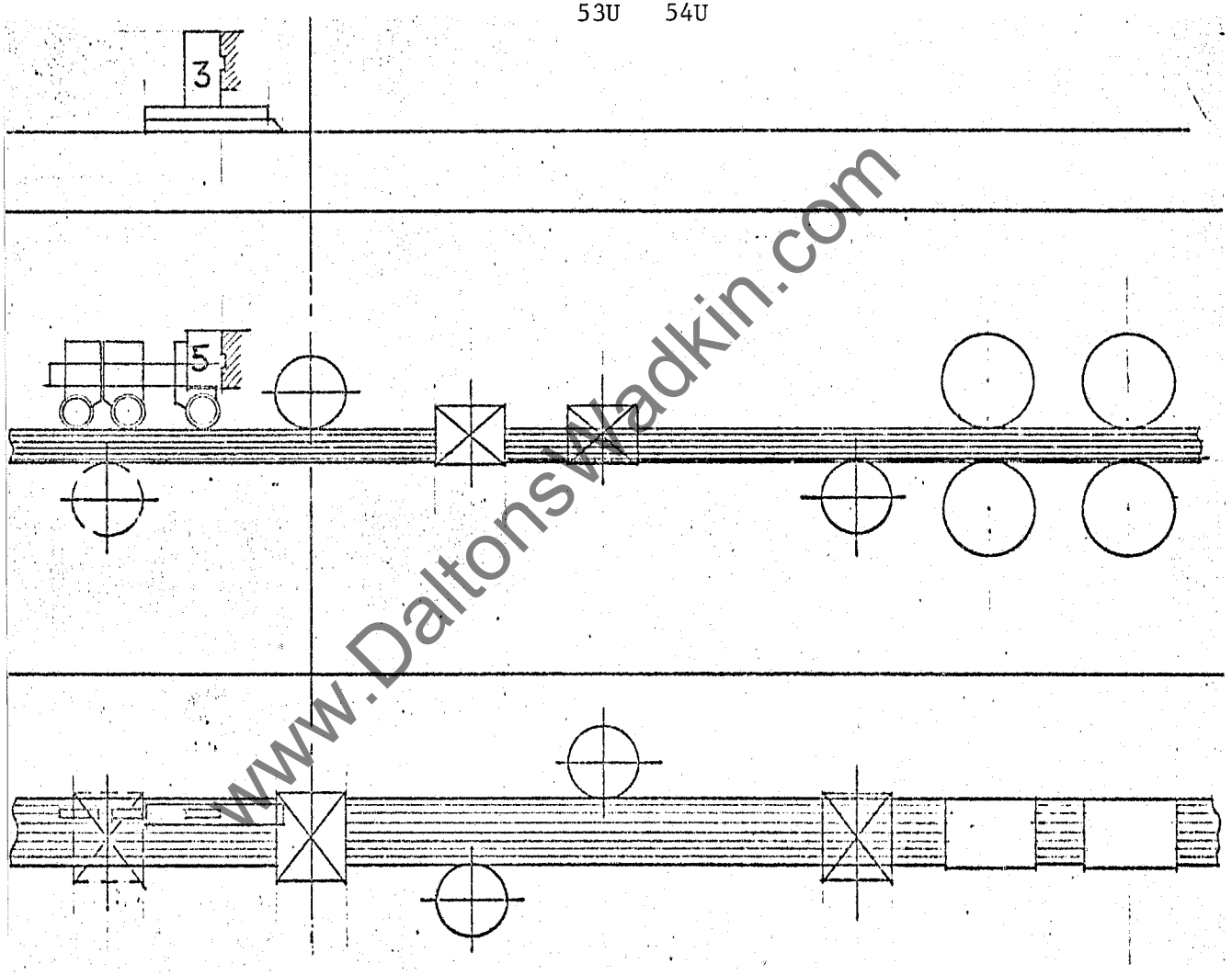
51U 52U

OPTIONAL PRESSURES to special order

5 in. FDB 130

COMMON ON MODELS 53 54

53U 54U



NOTE: Pressure (5) may be used as a triple unit as shown or as a double unit with pad pressure (3)

TRIPLE ROLLER PRESSURE ONLY

Minimum length

= 450mm (18in)

DOUBLE ROLLER PLUS PAD

CAPACITY NOT RESTRICTED

CAPACITY

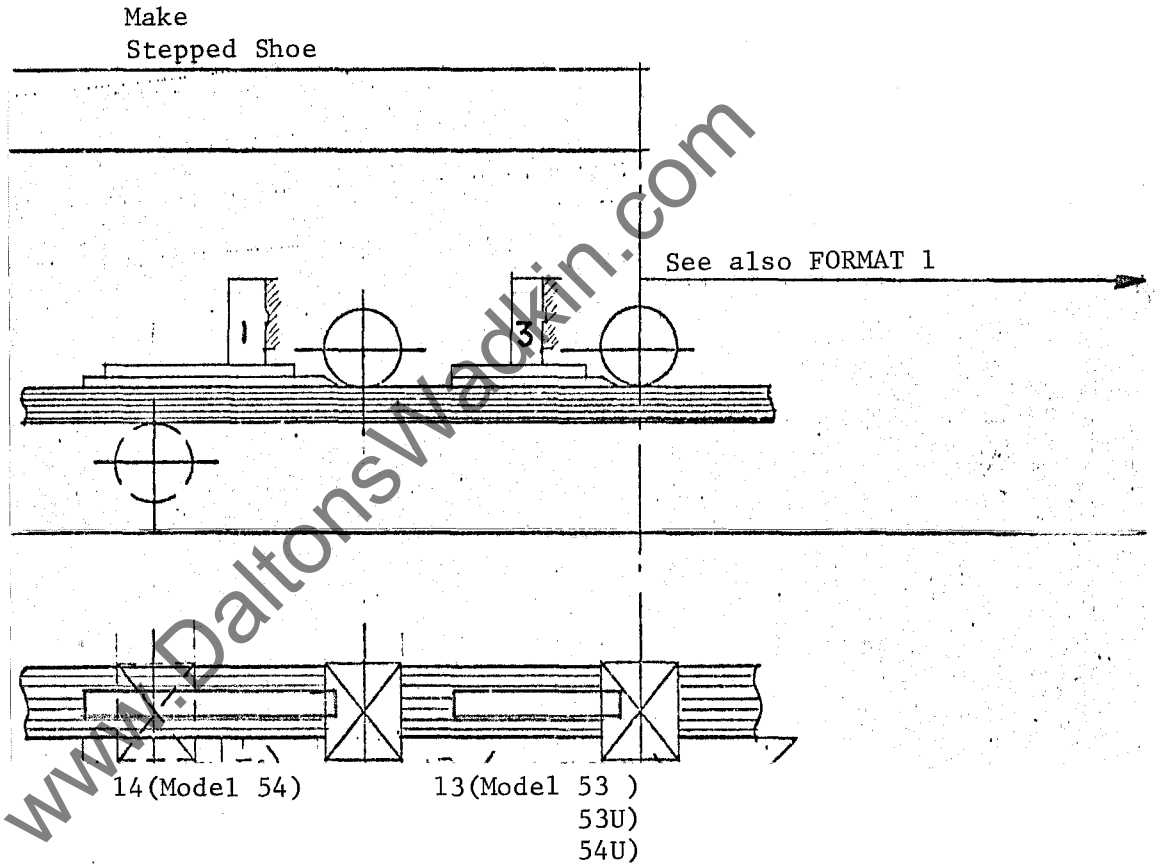
STANDARD PRESSURES supplied with machine

MODELS:
53 54
53U 54U

MINIMUM WIDTH
= 11mm (7/16in)

MINIMUM
THICKNESS
= 9mm =(3/8in)

MINIMUM LENGTH
= 600mm (24in)



MODEL 53U SEE ALSO P.47 MODEL 54U SEE ALSO P.49

CAPACITY

SHORT STOCK PRESSURES to special order

5 in. FDB 130

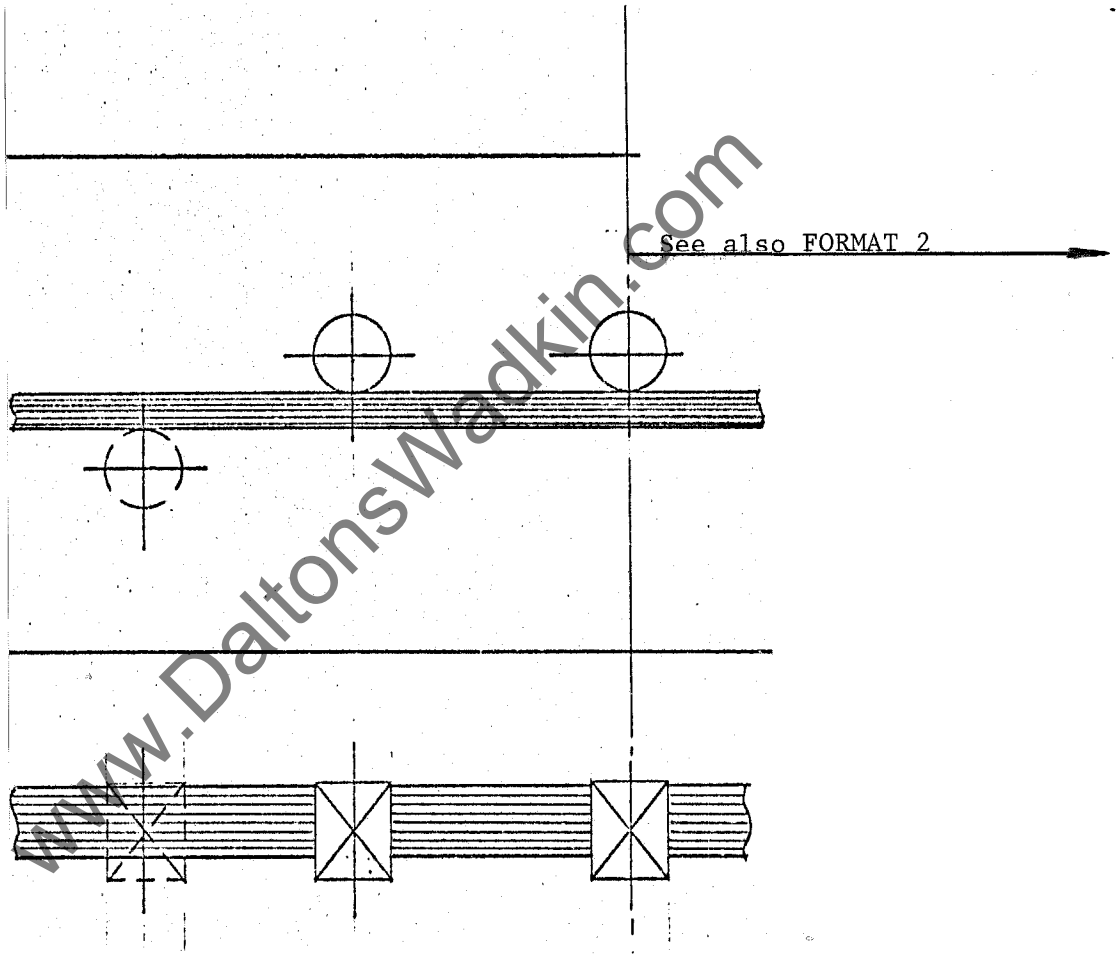
MODELS;

53 54
53U 54U

MINIMUM

LENGTH

= 350mm (14in)



CAPACITY

NARROW STOCK PRESSURES to special order

5 in. FDB 130

MODELS:

53 54

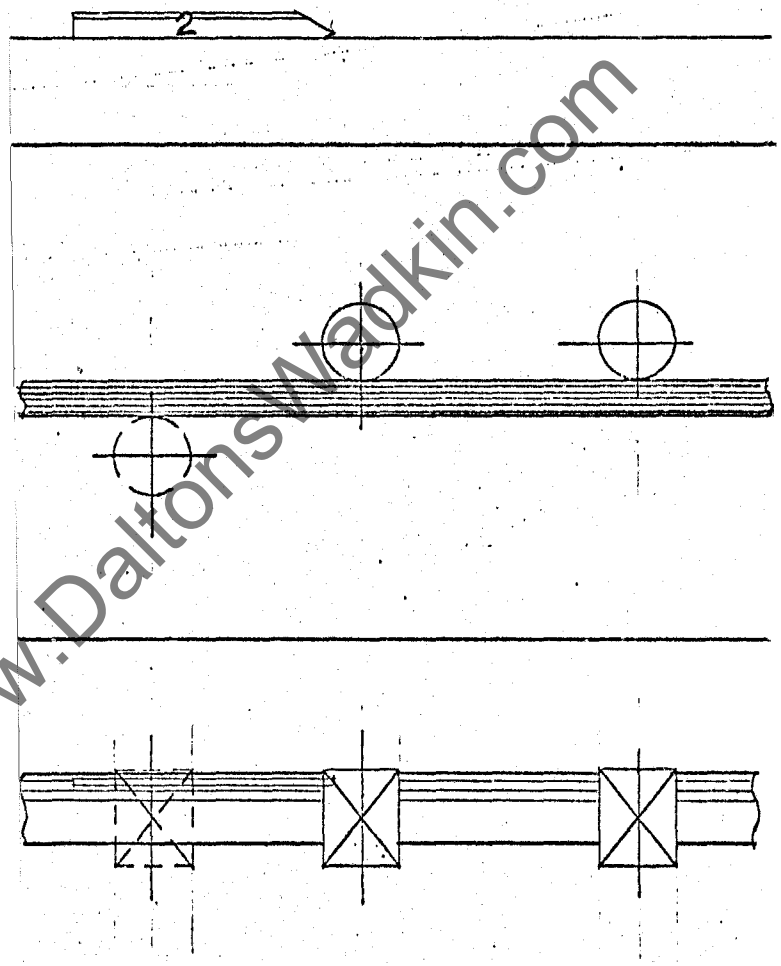
53U 54U

MINIMUM

WIDTH

= 11mm(7/16in)

NOTE: This shoe does not reduce the minimum width but eliminates the need to make special stepped wooden pads.



MODEL 53U SEE ALSO P48 MODEL 54U SEE ALSO P.50

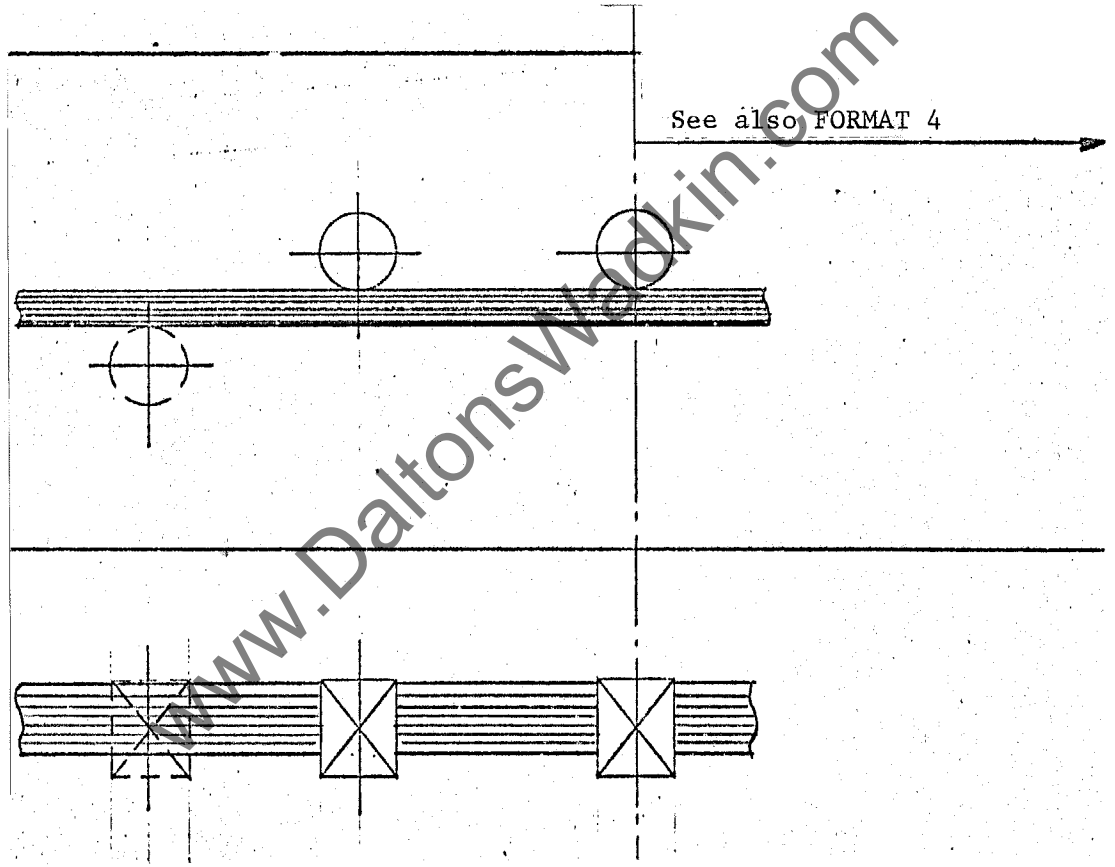
CAPACITY THIN STOCK PRESSURES to special order 5 in FDB 130

MODELS:

53 54

53U 54U

MINIMUM
THICKNESS
= 6mm (1/4in)



CAPACITY

MODELS:

53 54

53U 54U

NOTE: Pressure (5) may be used as a triple unit as shown or as a double unit with pad pressure (3)

TRIPLE ROLLER PRESSURE ONLY

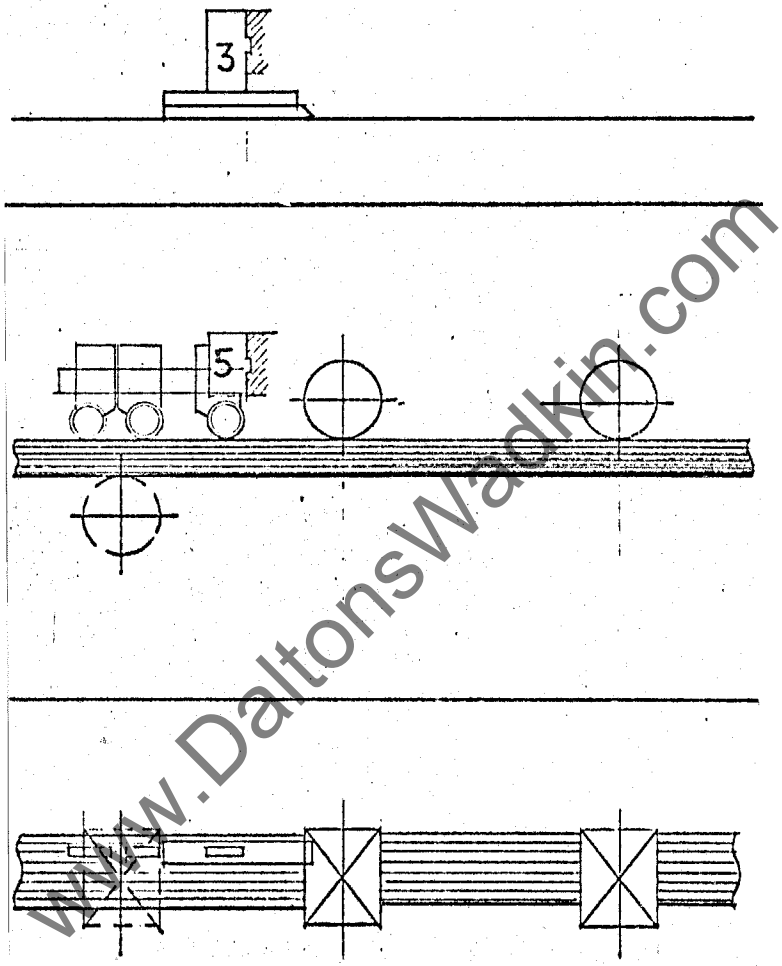
Minimum length = 450mm (18in)

DOUBLE ROLLER PLUS PAD

Capacity Not Restricted

OPTIONAL PRESSURES to special order

5 in FDB 130



CAPACITY

MODELS

55 56

55U 56U

MINIMUM WIDTH

= 9mm (3/8in)

MINIMUM THICKNESS

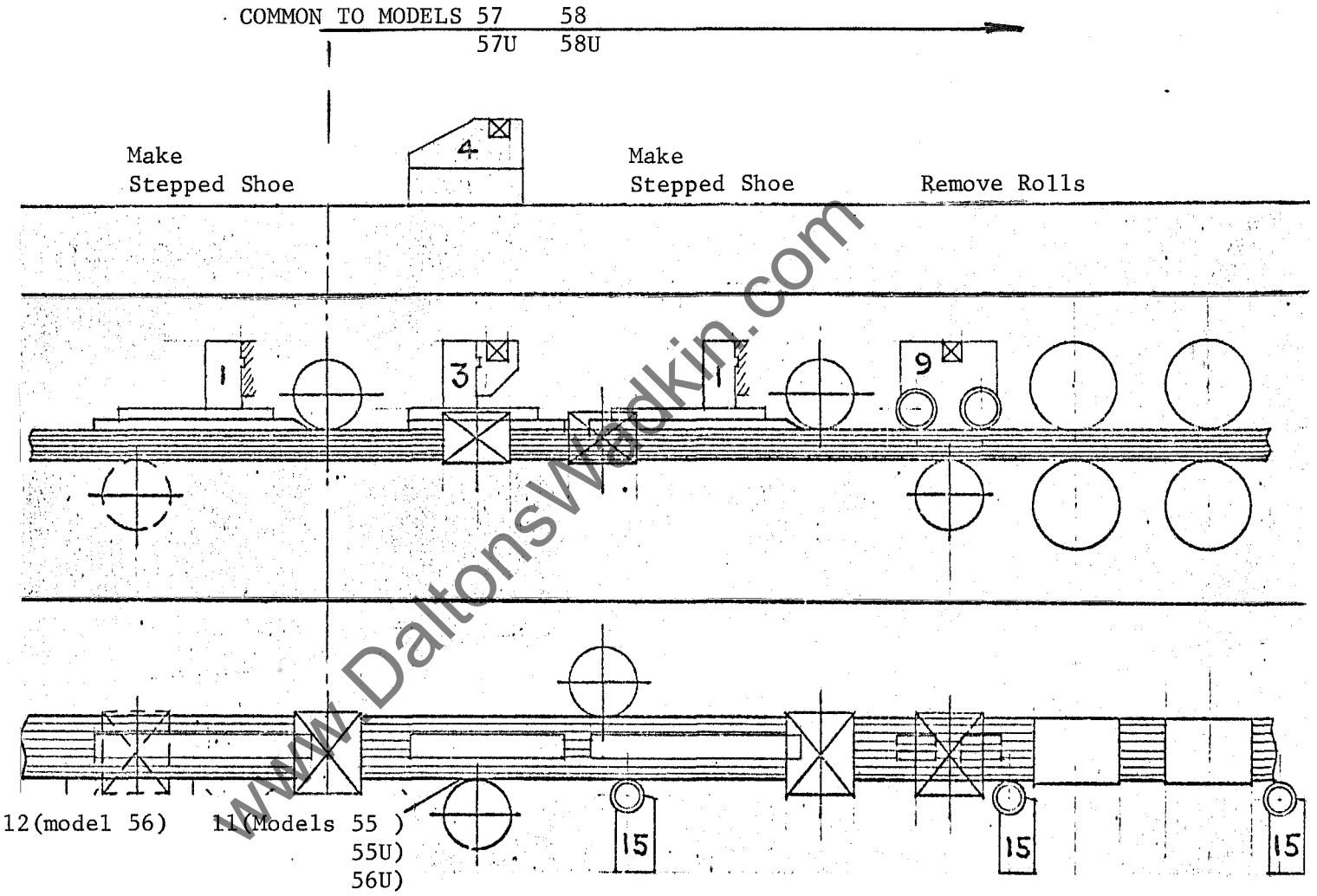
= 9mm (3/8in)

MINIMUM LENGTH

= 600mm(24in)

STANDARD PRESSURES supplied with machine

5 in.FDB 130



MODEL 55U SEE ALSO P. 47 MODEL 56U SEE ALSO P.49

CAPACITY

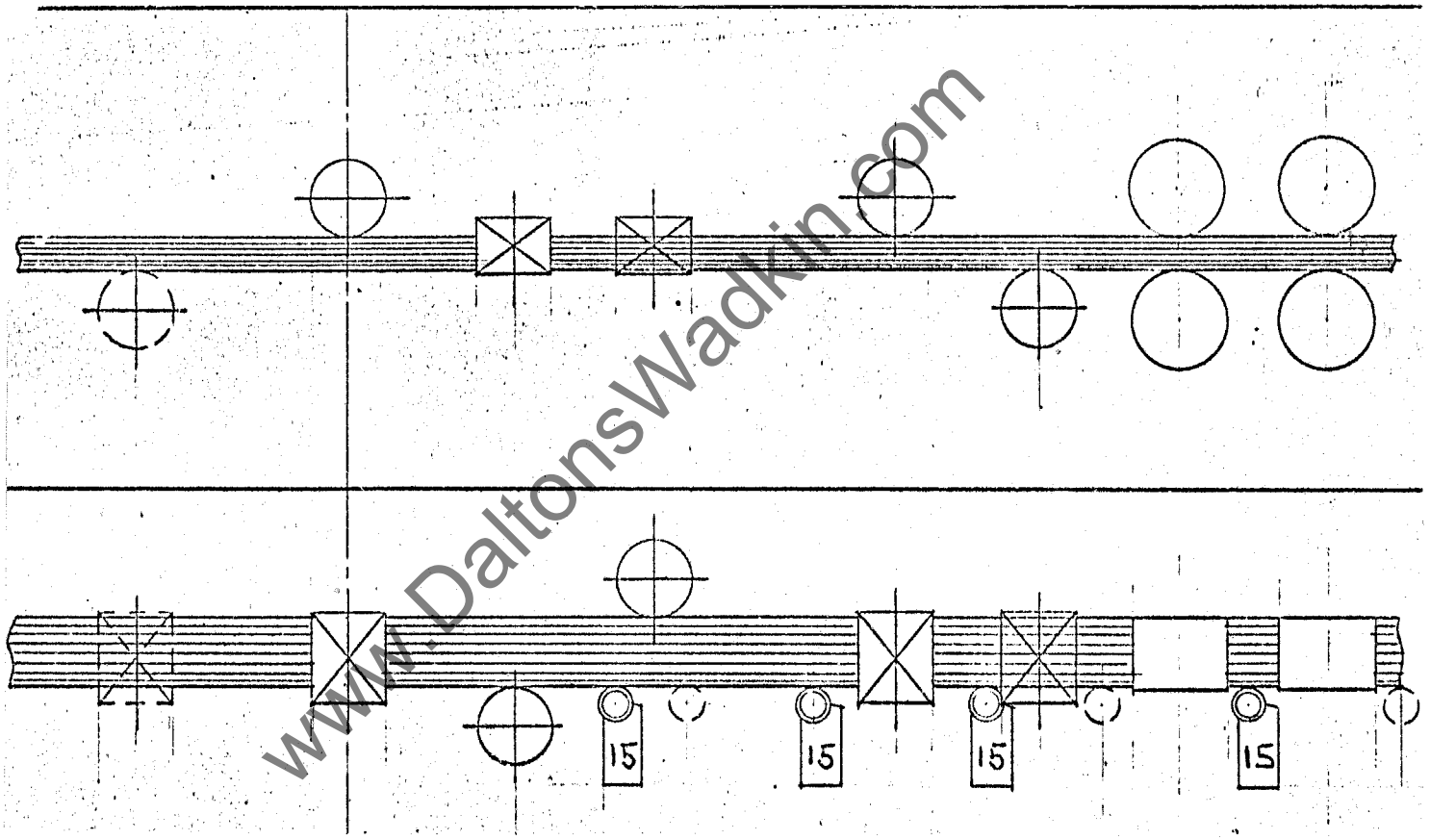
SHORT STOCK PRESSURES to special order

5in FDB 130

MODELS:
55 56
55U 56U

COMMON ON MODELS 57 58
57U 58U

MINIMUM
LENGTH
= 280mm (11in)



CAPACITY

NARROW STOCK PRESSURES to special order

5 in.FDB 130

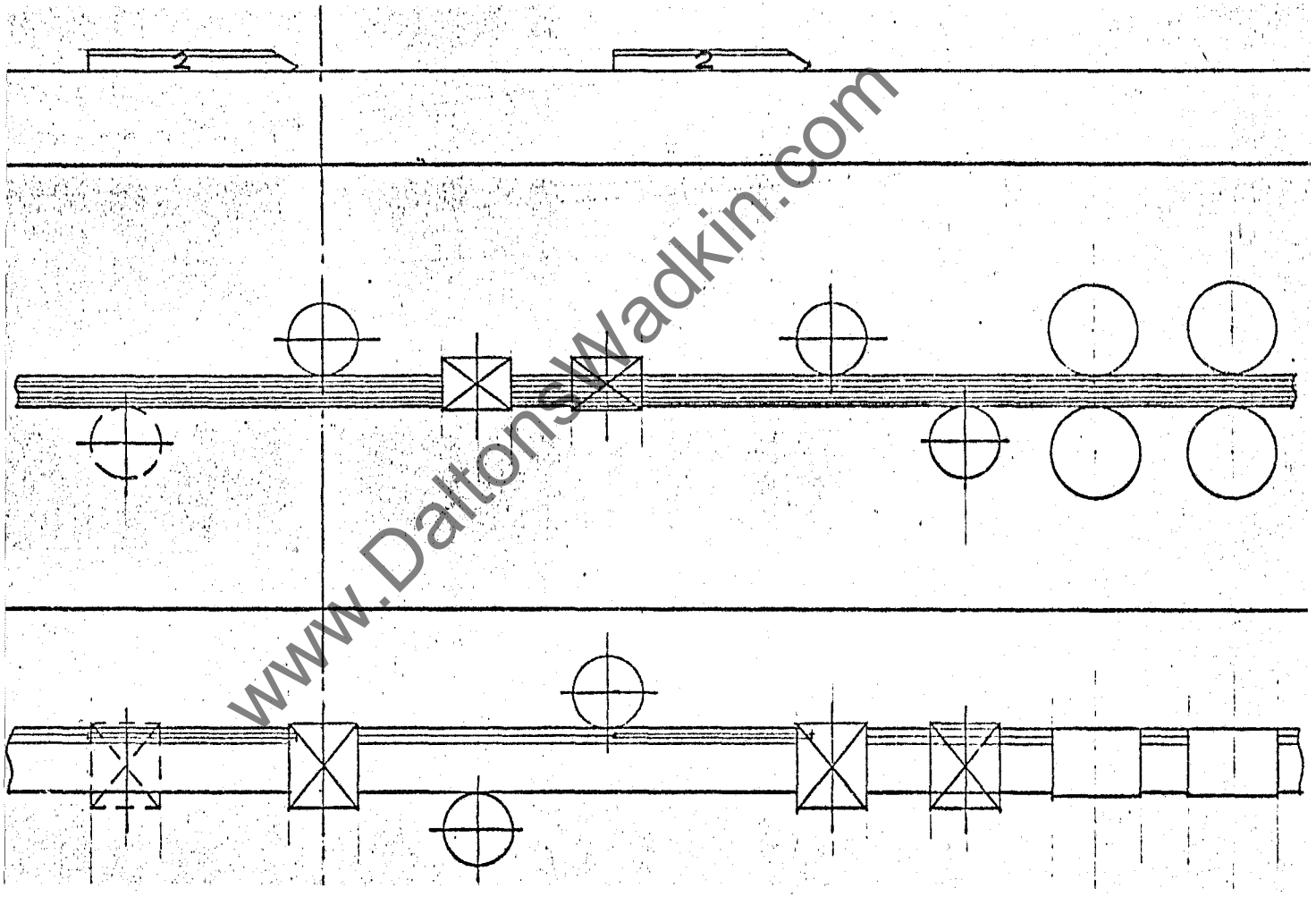
MODELS:

55 56

55U 56U

COMMON ON MODELS 57 58

57U 58U



MINIMUM WIDTH

= 9mm(3/8in)

NOTE: These units do not reduce the minimum width but do eliminate the need to make special stepped wooden pads

MODEL 55U SEE ALSO P.48 MODEL 56U SEE ALSO P50

CAPACITY

MODELS:

55 56

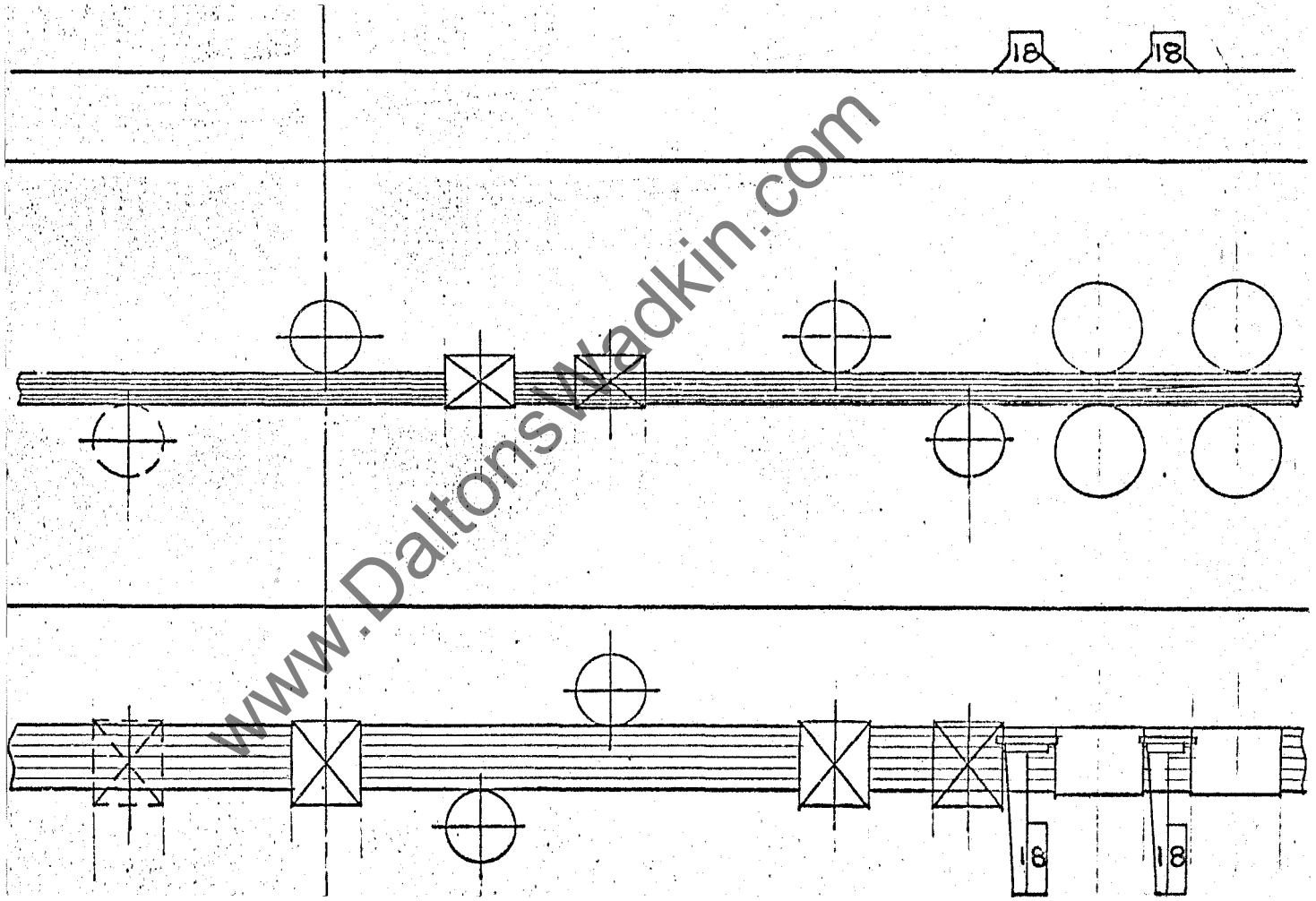
55U 56U

THIN STOCK PRESSURES to special order

5 in.FDB 130

COMMON ON MODELS 57 58

57U 58U



MINIMUM THICKNESS

= 5mm(3/16in)

CAPACITY

OPTIONAL PRESSURES to special order

5 in FDB 130

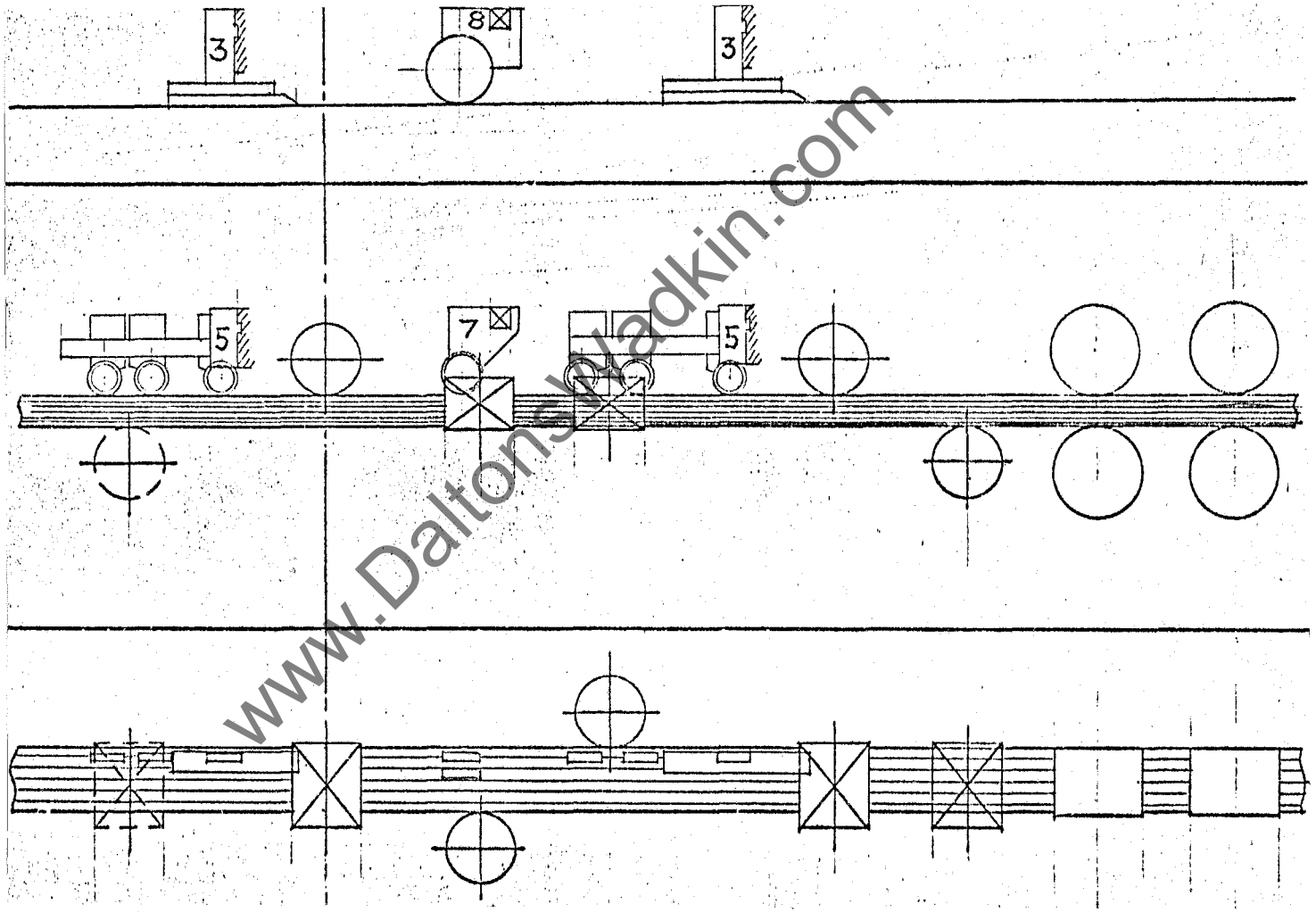
MODELS:

55 56

55U 56U

COMMON ON MODELS 57 58

57U 58U



NOTE: Pressure (5)may be used as a triple unit as shown (which limits the min. length to 450mm (18in) or as a double unit with pad pressure(3) which does not restrict minimum length

NOTE: Pressure (7) restricts the minimum width to 50mm (2in) Pressure (8) is fitted in place of (7) for narrow stock Minimum width = 11mm (7/16in)

CAPACITY

STANDARD PRESSURES supplied with machine

5in FDB 130

MODELS:

57 58

57U 58U

MINIMUM
WIDTH

= 9mm (3/8in)

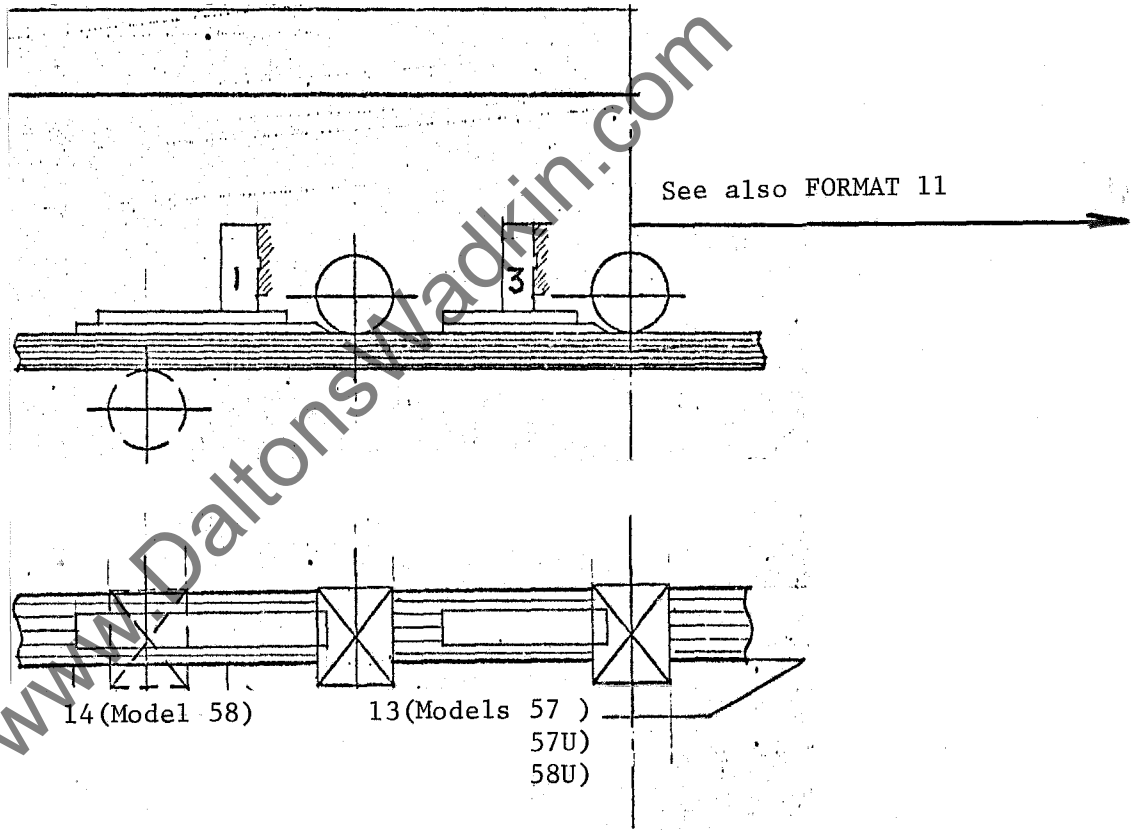
MINIMUM THICKNESS

= 9mm (3/8in)

MINIMUM LENGTH

= 600mm (24in)

Make
Stepped Shoe



MODEL 57U SEE ALSO PAGE 47 MODEL 58U SEE ALSO P49

CAPACITY

SHORT STOCK PRESSURES to special order

5 in FDB 130

MODELS:

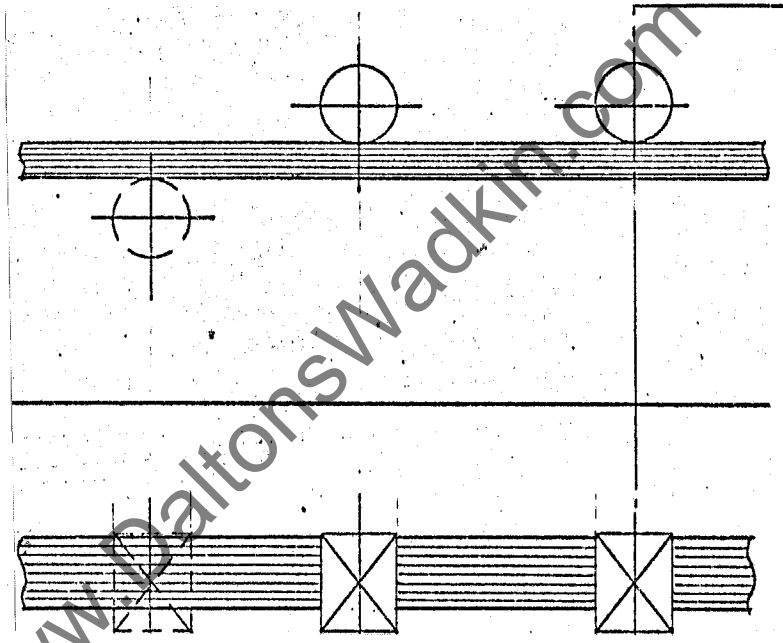
57 58

57U 58U

See also FORMAT 12

MINIMUM LENGTH

= 280mm (11in)



CAPACITY

NARROW STOCK PRESSURES to special order

5in. FDB 130

MODELS:

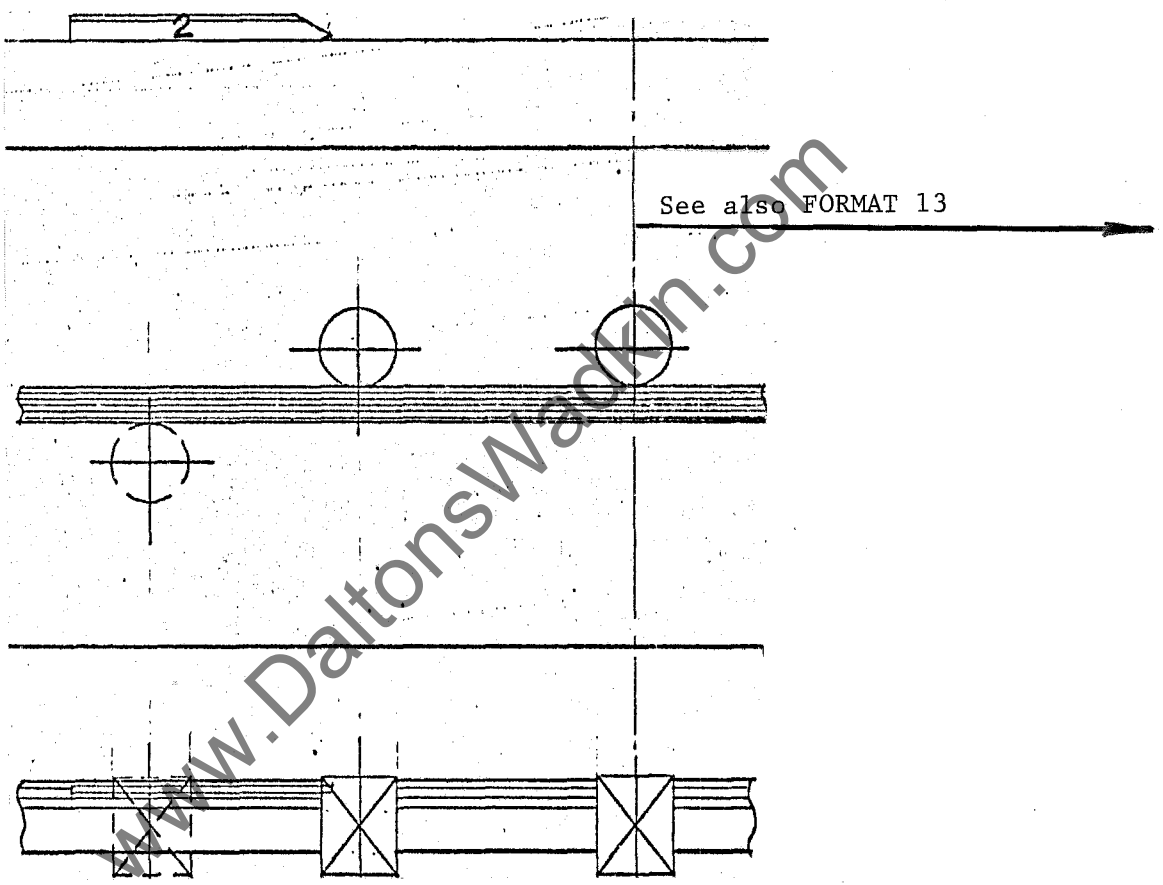
57 58

57U 58U

MINIMUM WIDTH

= 9mm (3/8in)

NOTE: This shoe does not reduce the minimum width but eliminates the need to make special stepped wooden pads.



MODEL 57U SEE ALSO P.48 MODEL 58U SEE ALSO P. 50

CAPACITY THIN STOCK PRESSURES to special order 5in FDB 130

MODELS:

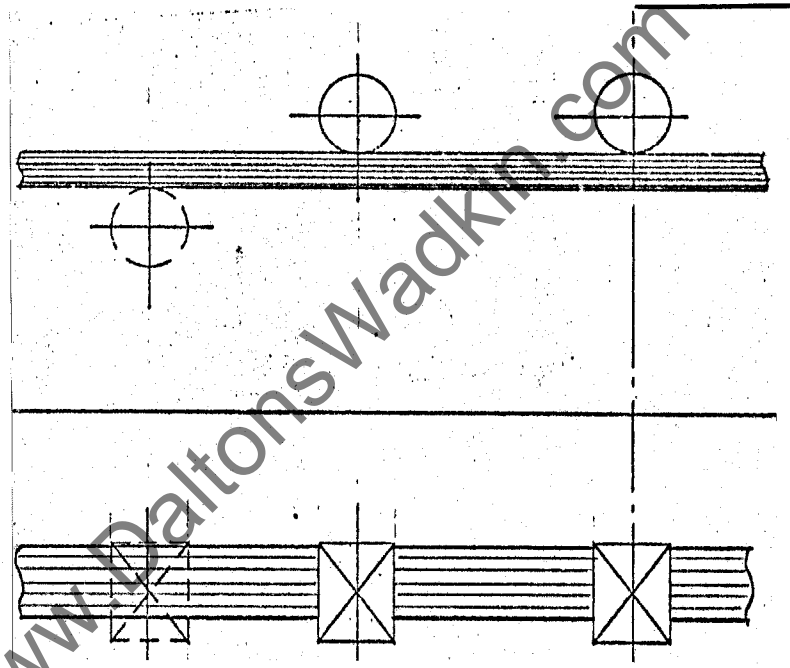
57 58

57U 58U

See also FORMAT 14

MINIMUM
THICKNESS

= 5mm (3/16in)



CAPACITY OPTIONAL PRESSURES to special order

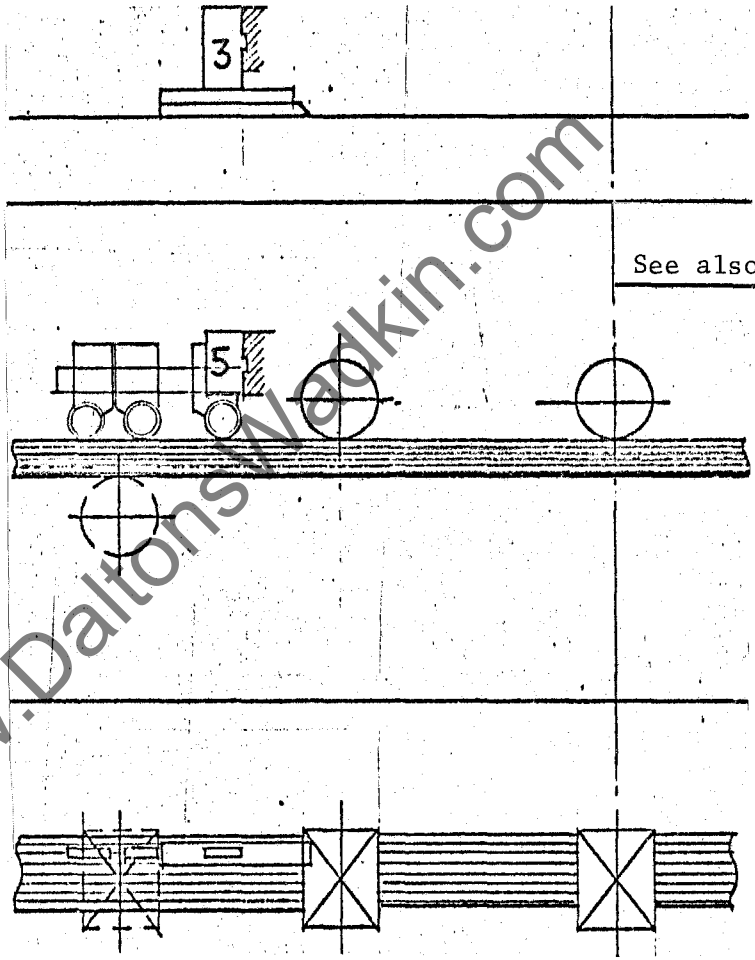
5 in FDB 130

MODELS:

57 58

57U 58U

NOTE: Pressure (5) may be used as a triple unit as shown (which limits the min length to 450mm (18 in) or as a Double unit with pad pressure (3) which does not restrict the minimum length.



See also FORMAT 15

CAPACITY

STANDARD PRESSURES SUPPLIED WITH MACHINE

UNIVERSAL HEAD

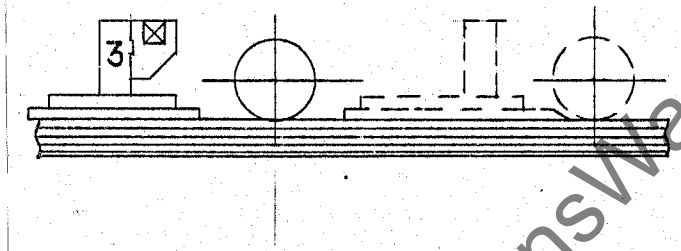
MODELS
51U
53U
55U
57U

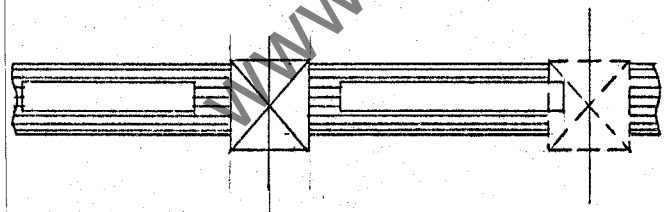
NOTE: These pressures do not restrict the capacity as stated on previous pages

NOTE: Side control is by universal head fences.

NOTE: Extra pressures are not reqd. for short or thin material

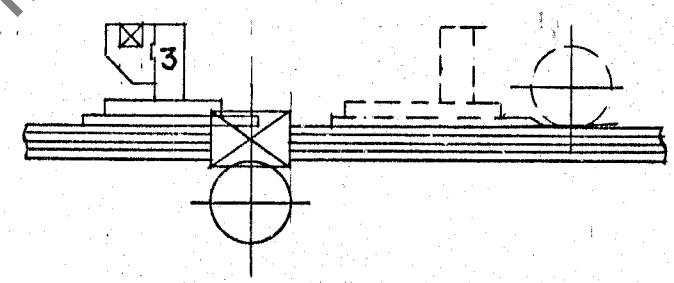
MAKE STEPPED SHOE

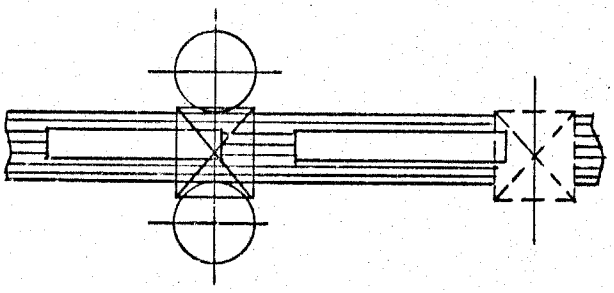




HEAD IN TOP POSITION

MAKE STEPPED SHOE





HEAD IN BOTTOM OR SIDE POSITIONS

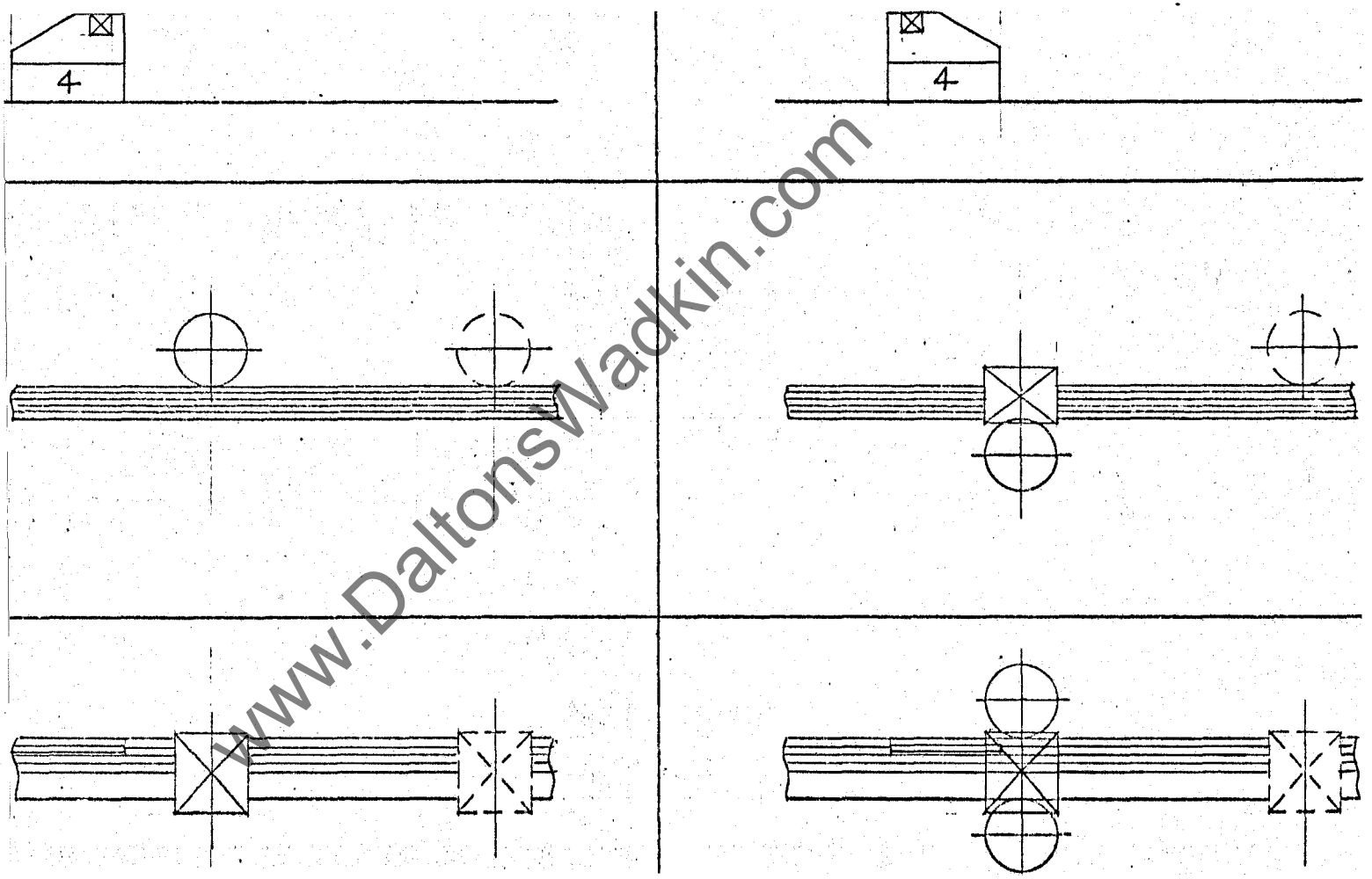
CAPACITY

MODELS:
51U
53U
55U
57U

NOTE: This pressure does not reduce the minimum width but eliminates the need to make special stepped wooden pads.

NARROW STOCK PRESSURES TO SPECIAL ORDER

UNIVERSAL HEAD



HEAD IN TOP POSITION

HEAD IN BOTTOM OR SIDE POSITIONS

CAPACITY

MODELS
52U
54U
56U
58U

NOTE: These pressures do not restrict capacity as stated on previous pages.

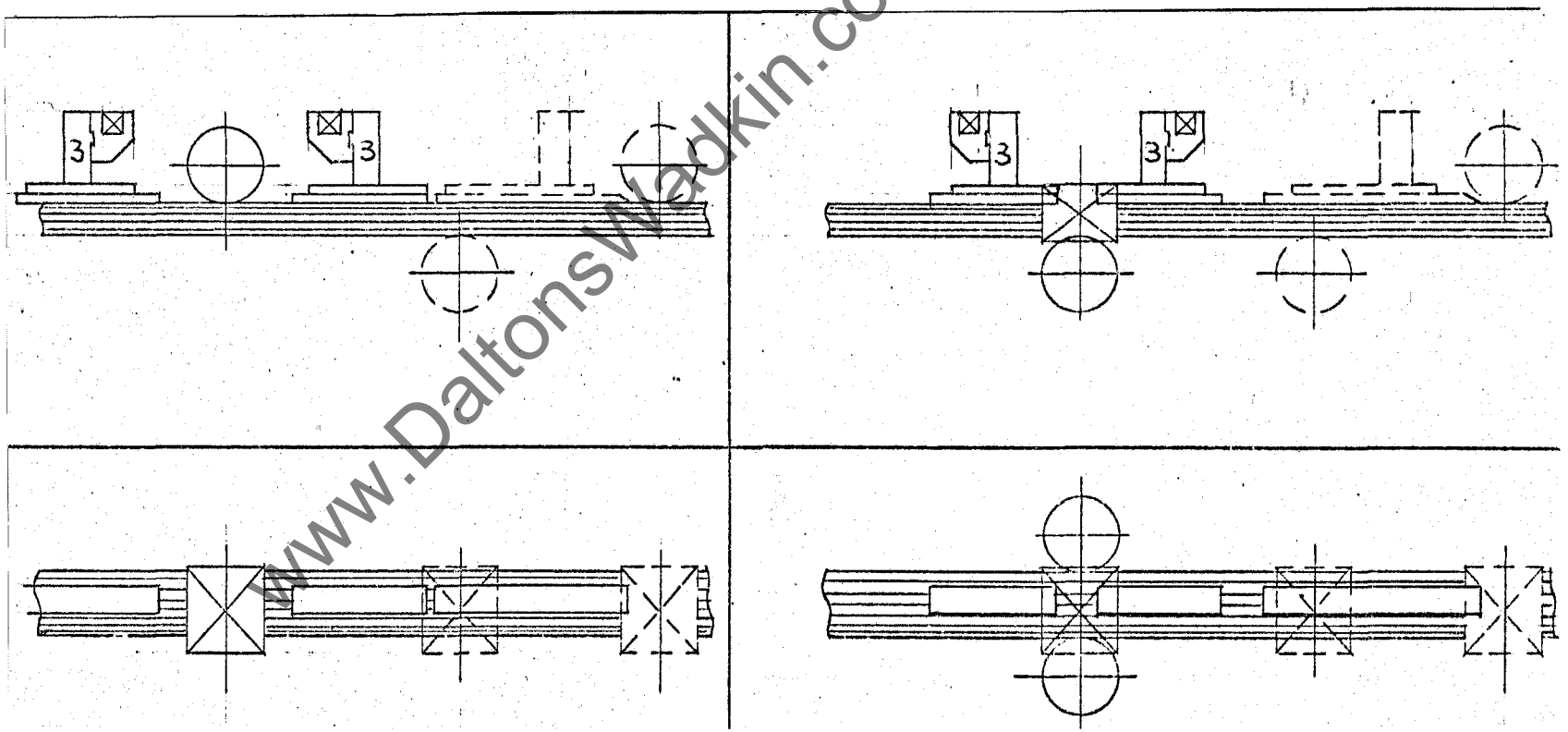
Note: Side control is by Universal Head Fences.

NOTE: Extra pressures are not reqd. for short or thin material.

STANDARD PRESSURES SUPPLIED WITH MACHINE

UNIVERSAL HEAD

MAKE STEPPED SHOE	MAKE STEPPED SHOE	MAKE STEPPED SHOE	MAKE STEPPED SHOE



HEAD IN TOP POSITION

HEAD IN BOTTOM OR SIDE POSITIONS

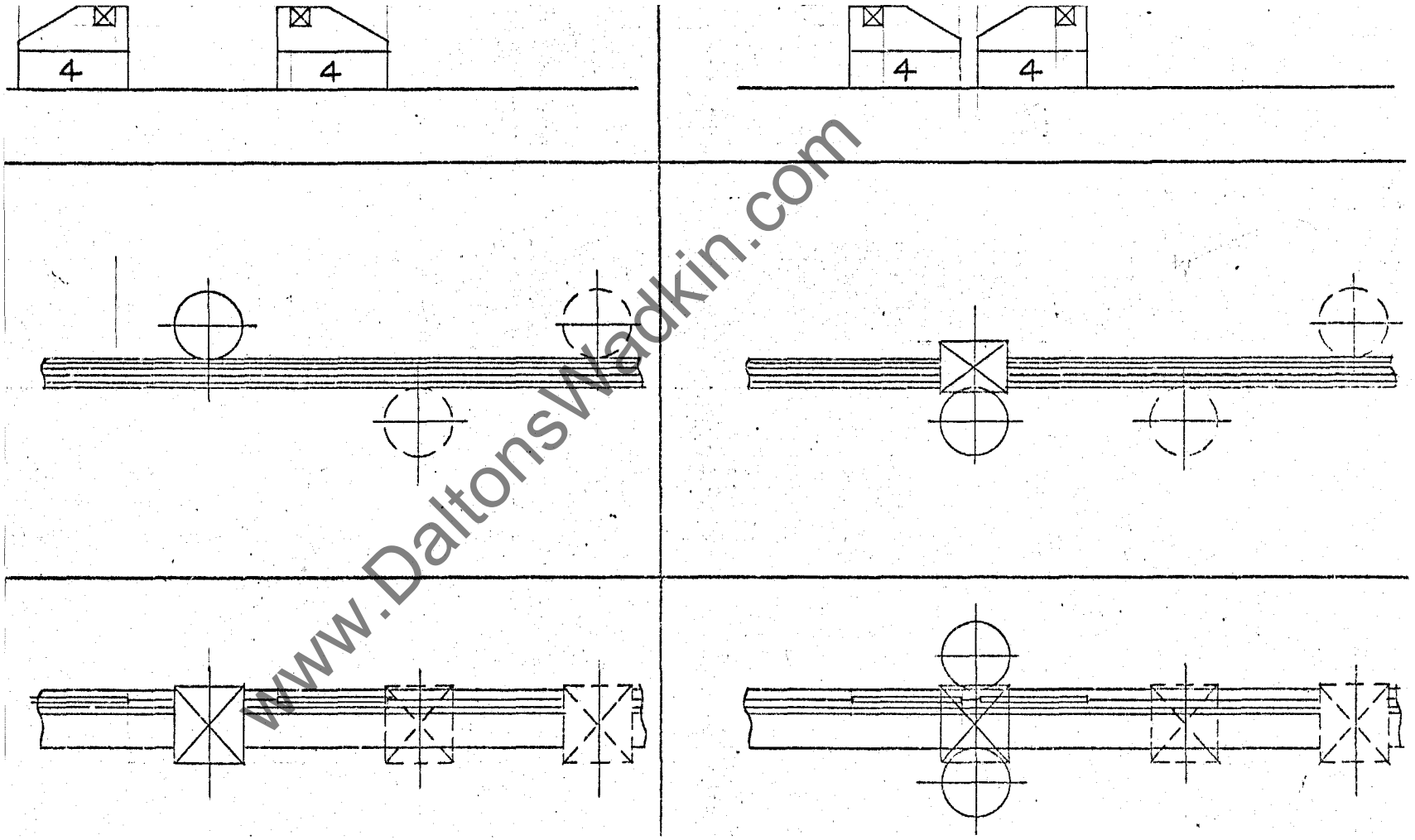
CAPACITY

MODELS:
52U
54U
56U
58U

NOTE: These pressures do not reduce the minimum width but eliminate the need to make special stepped wooden pads

NARROW STOCK PRESSURES TO SPECIAL ORDER

UNIVERSAL HEAD



HEAD IN TOP POSITION

HEAD IN BOTTOM OR SIDE POSITIONS

LUBRICATION SCHEDULE

DAILY

FEEDWORKS - Top up lubricator reservoir for the feedwork mechanism (L4.oil)

** - Hourly - (mechanical hand pump only) apply one shot.

PNEUMATIC - Top up air lubricator Mobil Almo No.1.access through lower door (front)

SPINDLES - Belt driven
Apply one shot of L1.oil to each lubricator positioned either at the spindle nose or main frame, bearing housing for front bearing and at the rear of main frame for rear bearing.

WEEKLY

Oil machine slideways and adjusting screw with L4.oil.
Check oil level in the feedworks gearbox with the dipstick. Top up with L2. oil. Change oil - 6 monthly.

NOTE: Where a Universal head is fitted the following lubrication points should be covered. Those at either end of the spindle assembly and also at either end of the motor. The slide ways should be lubricated with L4. oil weekly. The vertical slide leadscrew should be oiled via. the 'oiler' on the end of the drive adjusting square.

APPROVED LUBRICANTS

WADKIN GRADE	CASTROL	B.P.	SHELL	MOBIL	ESSO	GULF	CALTEX
L.1	Hyspin AWS 32	Energol H.L.P.32	Vitrol 32	DTE Oil 24 Light	Nuto 44 or Esstic H 44	Harmony 43 AW	Rando Oil HDA
L.2	ALPHA ZN 150	Energol H.P.150 OR C.S.150	Vitrea 150	Vactra Extra Heavy	Esstic 65	Service 13	Ursa P40
L.4	MAGNA 68	Energol H.P.68 OR C.S.68	Vitrea 68	Vactra Oil Heavy Medium	Esstic 50	Service 51	Ursa P20

L.1 OIL Hydraulic oil with anti-corrosion, anti-oxidation, anti-wear, anti-foam performance.

L.2 OIL Gear oil (viscosity 150 centi-stokes at 40°C.)

L.4 OIL Plain mineral oil (viscosity 68 centi-stokes at 40°C.)

** Current machines are fitted with a cyclic lubrication system - produced by Interlube Systems Ltd.,

The lubricator employed is Type SL 1513/010 and gives a constant discharge of 1.CC.per cycle. The lubricator is adjusted so as to give one discharge every 8 minutes - refer to Appendix 'E' for Operating and Maintenance Instruction, Publication No. 258. Issue 3.

Due to the enclosed construction of the SIMPLABELT pulleys very little maintenance is required. Regreasing must be effected every four weeks based on eight hours operation per day. In the interest of a long working life we would recommend the pulleys to be greased occasionally at the weekly machine cleaning i.e. in the intervals below.

8 hour day	once weekly
16 hour day	twice weekly
24 hour day	three times weekly

For greasing we recommend the following lubricants:

BP	ESSO	MOBIL	SHELL
BP Energrease RBB 2	Andok B	Mobilgrease BRB No.3	Shell Alvania Grease 2
BP Energrease LS2	Beacon 2	Mobilux 2	

When selecting another grease same or similar composition should be used.

5 in. FDB 130 MOULDER

ELECTRICAL INSTALLATION

The whole of the cabling between the motors and control gear is carried out by Wadkin Ltd. it is only necessary to bring the line supply to the machine and it is ready for running.

On certain machines,

(a) machines with frequency changers

(b) machines with free standing control cubicles.

certain disconnections are made for transit purposes, these should be remade when installing the machine, the cables disconnected are identified with letters and/or numbers and should be reconnected to the terminal blocks provided as shown on the diagrams supplied with each machine.

After connecting the mains supply to the machine check direction of rotation of the feed rollers and if correct, all other rotations of the head motors will be correct. If the direction of rotation of the feed rollers is incorrect, interchange any two of the incoming line supply cables at the isolating (disconnect) switch in the main control cubicle.

Providing all rust preventing grease has been removed, oil levels checked and lubrication carried out, the machine is ready to start up.

See operating instructions.

SUGGESTED LIST OF WEARABLE PARTS TO BE KEPT AS SPARES.

When ordering spare parts, always quote machine symbol, serial number and test number.

No: per M/c.	Description
	Top Feed Assembly
1	Sprocket and Gear
2	Gear for top rolls
2	Ina Needle bearing HK 5025
2	Ina Inner Race 45 IR
1	Hoffman bearing BRL 025
1	Chain No. 110056 5/8p. 49 Pitches
1	Chain No. 114046 Duplex 96 Pitches
4	Ball bearing 72 x 35 x 17mm
	Bottom Feed Assembly
1	Chain Tensioner
1	Chain Tensioner
2	Ina Shell bearing HK 5025
2	Ina Inner Race 45IR
1	Hoffman ball bearing 125 RS
2	Compo bush SN025 x 3/4 in
	Bottom Feedworks Chain Drive
1	Sprocket for Outfeed Rolls
1	Sprocket for Infeed Rolls
1	Chain Tensioner
2	Chain No.110046 1/2p 41 pitches
4	Ball bearing 72 x 35 x 17
	Top Feed Roll Adjustment
1	Raising screw for top rolls
1	No.5 Taper Pin
1	Gearbox output Duplex Sprocket
1	Chain No. 114046 Duplex 1/2 76 Pitches
	Plain Feed Roll
	Fluted Feed Roll
	Knurled chrome Feed Roll
	Polyurethane Feed Roll
	Polyurethane Feed Roll (2in wide)
	Bearings for Spring Loaded Spindles
2	Hoffman bearing N1071 (Per spindle)
	Bearings for High Frequency Spindles
1	Hoffman bearing N3349
1	Hoffman bearing N1071
1	SKF bearing 40 25 99
4	Pressure rollers over 1st bottom head DN211
4	Roller Pin
2	Side Pressure Roller
2	Roller Pin
2	Bearing LJ17/DD

No. per M/c	Description	Part Number
	Vee Belts	
2	Vee Belts for Feed Gear Box	
3	Vee Belts for Boeringer-Sturm Hydraulic Gear Box	
3	Vee Belts for Horizontal Heads 7.1/2, 10hp. 6000/9000 rpm	
2	Vee Belts for Horizontal Heads 7.1/2 - 10hp 7500/9000 rpm	
4	Vee Belts for Horizontal Heads 15-20 hp 7500/9000 rpm	
4	Vee Belts for Horizontal Heads 15-20 hp 4200/6000 rpm	
4	Vee Belts for Horizontal Heads 15-20hp 6000 rpm	
2	Vee Belts for Vertical Heads 6000/9000 rpm	
2	Vee Belts for Vertical Head (Fence Side) 7500/9000 rpm	
2	Vee Belts for Vertical Head (Near Side) 7500/9000 rpm	
1	Timing Belt for Universal Head 3000/6000 rpm	
1	Timing Belt for Universal Head 3600/7200 rpm	

NOTE: A "LOCTITE" Service Kit is supplied with each machine: If in doubt of its application during maintainance, contact Wadkin Service Department for relevant information.

DATE / ALT. No.	SIG.
20.3.81	F
	E
	D
	C
	B

1) "ATLAS" "COPCO" CYLINDER
2) QUICK EXHAUST VALVE KQE 1/B4
3) 5. PORT VALVE KMV9/95
4) 3. PORT VALVE - PUSH BUTTON KMV1/43
5) 3. PORT VALVE - "SOLENOID" OPERATION KMVS2/20/4P
6) PRESSURE REGULATOR KASR 100PB4
7) PRESSURE GAUGE 0 - 100 304 - M160
8) LUBRICAT OR CONTROL ASSEMBLY K30 G1 717

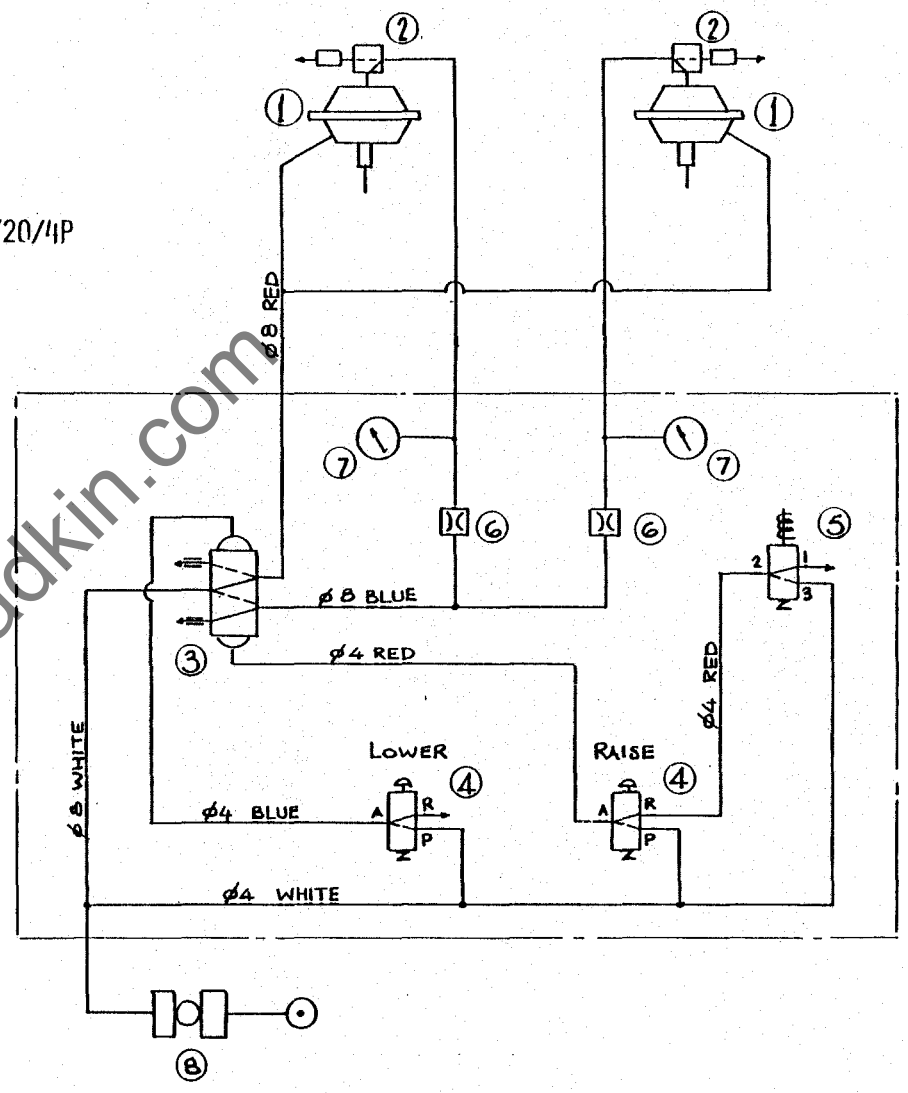


DIAGRAM FOR PNEUMATIC FEEDROLL CONTROL

GENERAL TOLERANCES, LIMITS & SURFACE FINISH, UNLESS STATED

FLATNESS, STRAIGHTNESS, SQUARENESS, PARALLELISM		0.04 IN ANY LENGTH UP TO 300, PLUS 0.04/300 THEREAFTER
RUN OUT	↗	0.08mm T.I.R. MAX
CYLINDRICITY	⌭	0.02mm MAX
ANGULARITY	∠	± 0.25° MAX.
SYMMETRY	⌯	
WHOLE NUMBERS		± 1mm NON ACCUMULATIVE
1 DECIMAL PLACE		± 0.1mm NON ACCUMULATIVE
2 DECIMAL PLACE		

▽ — 6.3-25.0 MICRONS. ROUGH M/C
▽▽ — 1.6-3.2 MICRONS. FINISH M/C
▽▽▽ — 1.6-3.2 MICRONS. ROUGH GRD.
▽▽▽▽ — 0.4-0.8 MICRONS. FINISH GRD.

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

MACHINE SHOP NOTE -

*INSPECTION MUST PASS THE FIRST COMPONENT OF A BATCH BEFORE STARTING THE SECOND

THIRD ANGLE PROJECTION	DATE	A	**WADKIN LTD. LEICESTER**	QTY.	MATERIAL
SIMILAR TO page 56	DRAWN		DESCRIPTION	SCALE	PART No.
	CHECKED		DIAGRAM FOR PNEUMATIC FEEDROLL CONTROL		

5 in. FDB 130 MOULDER

ELECTRICAL CONTROLS

The electrical supply isolating (disconnect) switch is situated in the main control cubicle and before any cutterhead or feed can be started the switch must be turned to the 'on' position.

The master 'lock off' pushbuttons must be turned and released before any head or feed can be started, these buttons are situated at the infeed and outfeed end of the pushbutton channel on the front of the machine.

To start the cutterheads, first ensure that the cutterblocks are free to rotate then press the respective start pushbutton situated on the push-button channel, to stop the cutterhead press the associated stop button. These buttons are conveniently situated in line with the respective cutterheads.

To start the feed motor first select the feed speed required, i.e. low speed (1) or high speed (2) with the selector switch situated on the rear of the main control cubicle, then press the start feed push button at the infeed end of the machine, to stop the feed press the stop feed button. The feed rolls can be reversed by depressing and holding the inch (jog) reverse pushbutton situated at the infeed end of the machine. Similarly the feed can be "Inched" (Jogged) forward by holding depressed the "Inch" (Jog) pushbuttons situated at both the infeed and outfeed end of the machine. The outfeed "Inch" (Jog) pushbutton when depressed will also stop the feed rolls, if it is required to inch (jog) forward the feed rolls from the outfeed end of the machine, this pushbutton reverts to its normal control function. i.e. it is an inch (jog) and stop feed button.

Failure to Start.

1. Electrical supply is not available
2. Fuses have blown or are not fitted.
3. Isolating (disconnect) switch has not been closed.
4. One or both of the master stop buttons is locked in the 'OFF' position.

Shut down during operation and failure to re-start.

1. Fuses have 'blown'.
2. Overloads have tripped, these will automatically reset after a short time.

Machines with Frequency Changers.

The cutterhead motors which operate from the output supply of the frequency changer will not run until the frequency changer is running. It is electrically interlocked in such a manner that a cutterblock head cannot be started until the frequency changer starter is energised and the frequency changer has "run up" to speed.

PREPARATORY STEPS TO MACHINING

Having knowledge of the dimensions of the finished workpiece the following sequencial procedures should take place.

1. Set the infeed fence to its mid position, release locking knob (1) then turn knob at the end of the fence (2).

2. Set the section of fence which extends from the fence side head to the outfeed table. The setting should allow for the appropriate amount of timber removal by the fence side head.
The setting is achieved by releasing the locking nuts (3) and ratchet handle on square (4), (straight edge between outfeed and infeed fences).

3. Adjust the fence side head to bring the cutting circle in line with the outfeed fence, lateral adjustment via square (5), locknut (6). Adjust the table to within 3 to 6 mm (1/8 - 1/4 in.) in front of cutting circle - locking levers under bedway.

4. Set the fence gap at the fence side head to clear the cutting circle by the adjusting piece on the outfeed and infeed fences (7).

5. Set the vertical position of the infeed table section between the feed rolls and the first bottom head.
The setting should coincide with the amount of timber to be removed by the first bottom head.
Adjustment is via the square (8) lock in position following adjustments.

6. The bottom feed roll should be adjusted to be 0.8mm (1/32in.) proud of the table by handle (18). "Rough timber requires a greater projection"

7. The bottom head cutter block should be adjusted so that the cutting circle is level with the outfeed table and the cutterblock is laterally adjusted to be 3mm (1/8in.) behind the rear fence line.

8. Set the clearance of the stock gate at the infeed so as to clear incoming material by 6mm (1/4in.)

9. The first top head should be set to machine the required thickness.
Vertical adjustment is via square (9) and locking lever (10).
Lateral adjustment of cutter head is via ratchet handle (11) and locking lever (12) and should be adjusted to be 3mm (1/8in.) behind the rear fence line.

10. The first top head chipbreaker shoes should be set for clearance to the cutting circle of the block and can be set to any one of four positions by stud (13).

11. Chipbreaker shoes should rest on the timber with approximately 3mm (1/8in.) depression on the spring loading.
NOTE: A jacking screw is provided on the rear of chipbreaker hood to restrict downward movement of the hood assembly.

12. Roller and pad pressures should be raised to permit free movement of timber for setting purposes and laterally adjusted in approximate positions for the timber to be machined.

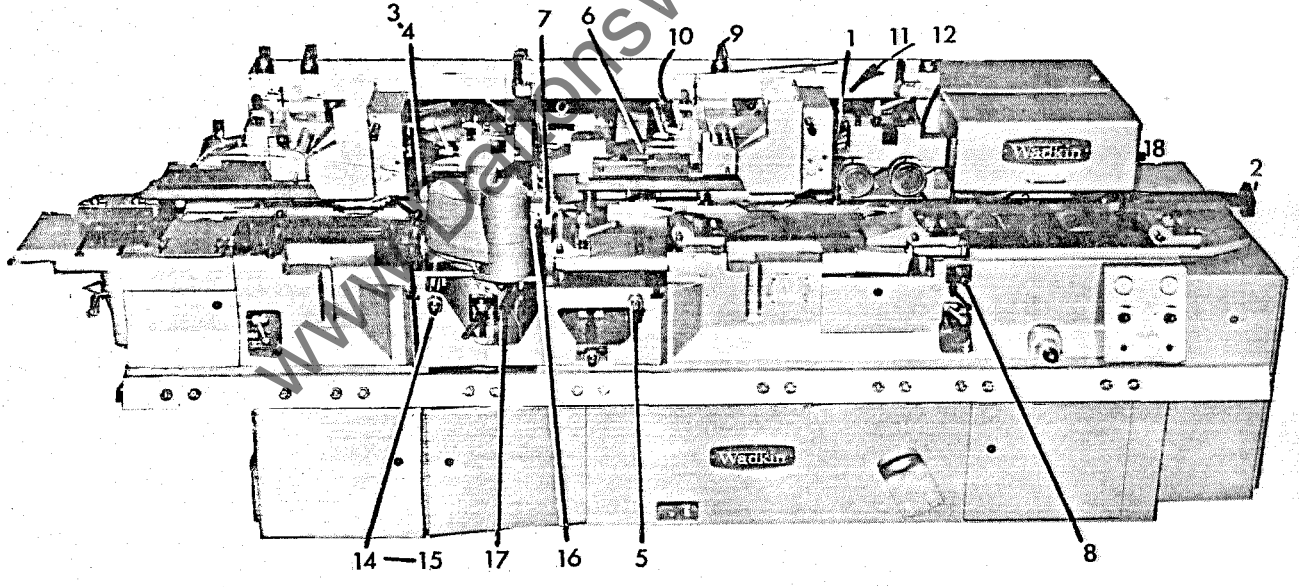
13. The near side head should be set to machine the timber to the required width. Lateral movement via square (14) locknut (15) Adjust table to within 3-6mm (1/8 - 1/4 in) of cutting circle - locking levers, under bedway through rear aperture.

14. Near side head chipbreaker should be set by selecting one of the two positions by adjusting screw (16) releasing the knurled handle locking nut (17) and turn the knurled handle to align the chipbreaker shoes with the cutting circle.

15. Where second or third top heads are fitted set head and chipbreaker as in procedures 9, 10 and 11.

16. Where second bottom head is fitted the outfeed table is set level with the cutting circle using a straight edge and the table is moved in or out to provide minimum clearance to the cutting circle.

17. Adjust the vertical position of the head and outfeed table to gain the cut required, relative to the machine table.



MACHINING

1. Select a piece of timber to be machined, enter to the first feed roll allowing 6mm (1/4 in) clearance on the stock gate.

   NOTE: (Where air operated rolls are fitted there must be a clearance of at least 15mm (5/8 in) between the roll and the top face of the timber). Where hand adjustable rolls are fitted a suitable gripping pressure should be set on the timber.

2. Adjust the first side pressure on the infeed table up to the timber with no exerted pressure (clearance - this is a guide only) where short stock is run a similar side pressure should be mounted between the feed rolls

3. When air operated rolls are fitted select rolls down.

4. Inch (Jog) forward the timber until it enters the first side pressure roller, then adjust in the roller to give 4mm (3/16 in) depression on the rollers.

5. Lower the first top roller pressure to 3mm (1/8 in) depression on the roller.

6. Start first bottom head cutterblock.

7. Inch (Jog) the timber through until it just causes the first top head chipbreaker shoes to lift.

8. Start first top head and inch (Jog) timber through until it enters 50mm (2in) under the following top pressure (pad).

9. Wind the pressure down to touch the timber. This pressure incorporates flexible rubber bushes and should not be 'wound' down until solid.

10. Inch (Jog) the timber through to the next side pressure (roller) and set 3mm (1/8 in) depression.

11. Start fence side head.

12. Inch (Jog) to move the timber up to the back fence.

13. Set second top pressure (first pad) to hold.

14. Start nearside head.

15. Inch (jog) timber through to end (back) of second pad pressure.

16. Wind down to hold over the full length.

17. When a second top head is fitted Inch (jog) until the timber just causes the second top head chipbreaker shoes to lift.

18. Offer up the near side fence to the approximate width of finished timber.

19. Start second top head.

20. Inch (jog) through the timber until it enters 50mm (2in) under the following top pressure pad.

21. Wind down the pressure to just touch the timber. This pressure incorporates flexible rubber bushes and should not be "wound" down until solid.

22. Inch (jog) through the timber approximately up to the last bottom head.

23. Reset pressure as in (21) to hold over the full length.

24. Set the outfeed side pressure to hold along length.

25. Start the last bottom head.

26. Inch (jog) through timber to the outfeed table, run one complete piece and check dimensions.

27. If the finished piece of timber is not dimensionally correct adjust where necessary.

APPENDIX 'A' UNIVERSAL HEAD

UNIVERSAL HEAD

General

A universal head can follow either a top head or a bottom head. Machines so supplied have the suffix 'U' after the model number.

Construction

The slide is part of a substantial iron casting carried on an 'L' shaped fabrication bolted to the end of the body and carries an upper stand unit to which is bolted an extension to the longitudinal beam. An outfeed table with rise and fall and lateral adjustment is mounted on the outside of the vertical 'L' shape.

Spindle

The spindle is 40mm with 40° included angle integral cone and fitted with double keys to allow for direction reversal with a totally enclosed timing belt drive from the motor. The spindle is approximately 195mm long for 150mm long cutterblocks, but longer blocks can be accommodated by recessing the cone and nut. Speeds of 6000 and 3000 r.p.m. are standard.

Electrical Equipment.

The motor is a 7.5/5.5 kW (10/7.5 h.p.) 2 speed TEFC unit running at 3000/1500 rev/min. Start, stop, 2 speed and forward and reverse controls are mounted in a control box on the main frame adjacent to the universal head. Where a 'Rotor Push' direction and start push switch is fitted, before depressing the start pushbutton - turn the barrel of the push switch to select the spindle direction.

Dust Extraction

A variety of dust hoods is available to suit the application

Pressures

Standard pad pressures are mounted before and behind the unit.

Application

The long movements of both horizontal and vertical slides, together with the worm and wheel canting features, allow the spindle to be positioned as a top, bottom, fence or front side head and in any intermediate position of cant. In addition, the open construction allows the fitting of large diameter saws for splitting and sill throating.

ADJUSTMENTS

HORIZONTAL.....FIG.2.

The complete Universal Head assembly can be traversed laterally by movement of the slide via square (1) from either the front or rear of the machine locking lever (2) holds this movement.

VERTICAL.....FIG.3.

A vertical slide unit mounted on the horizontal saddle may be adjusted via square (3) three locking nuts (4) are provided to hold this movement.

Both of the above movements can be used to provide for either top or bottom head positions. By positioning the spindle in a vertical mode the spindle can then be used as front or fence side head.

CANTING.....FIG.4.

The spindle can be positioned 110° back or forward to the vertical and locked in any intermediate position. A cranked handle is fitted to the worm drive square (5) at either the front or rear of the machine, three locking nuts (6) secure the canted head.

A canted head cutting position can be selected above or below the table

Various table sections can be fitted to suit the mode of machining, a dust extraction hood is supplied and must be fitted to the mounting collar inboard of the cutter. The hood and collar are adjustable for the various positions of the head.

OUTFEED TABLE (machine)

When a Universal head follows a second bottom head various 'infill' table sections are available to suit the cutting circles of both heads. This table section is set vertically as the outfeed to the last bottom head.

OUTFEED TABLE (Universal Head).....FIG.1.

This table section is set in the vertical by means of adjustment on a 30° slideway via knob (1), locking lever (2) holds the movement.

The table section can be adjusted to clear the cutting circle, two locking points for this section are located on the underside of the table.

Reference should be made to the Pressure Section of this manual for the various fixtures and arrangements.

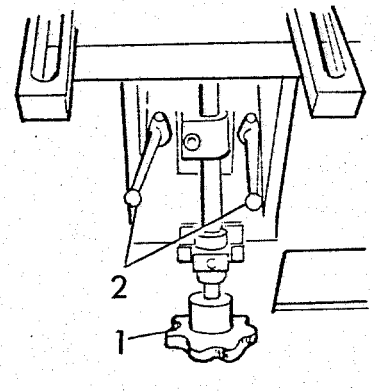
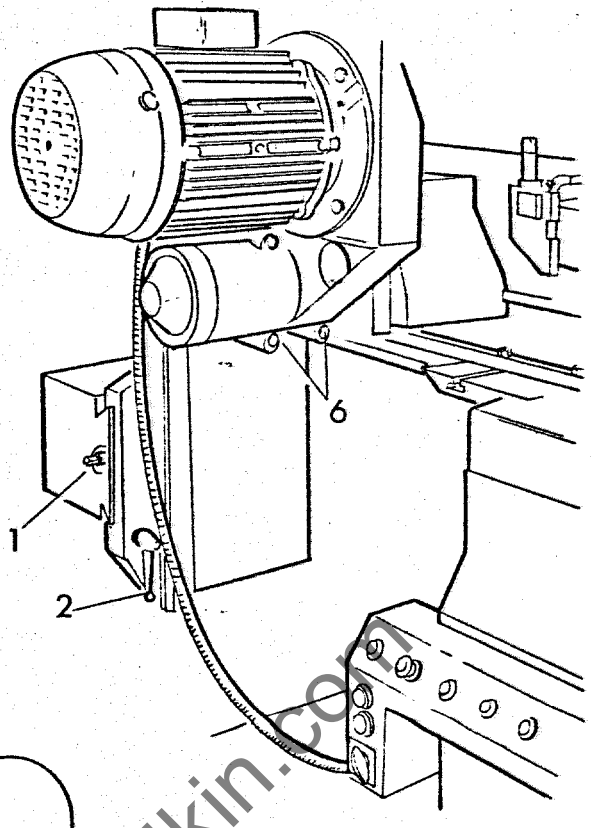


FIG 1

FIG 2



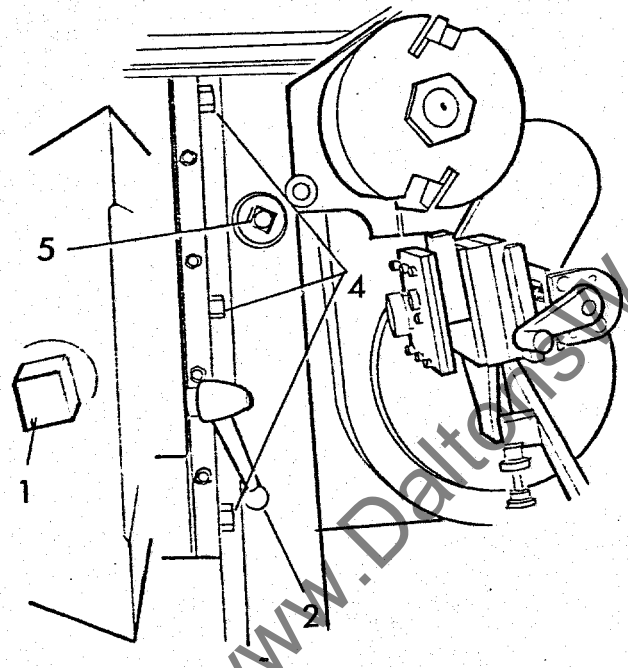


FIG 3

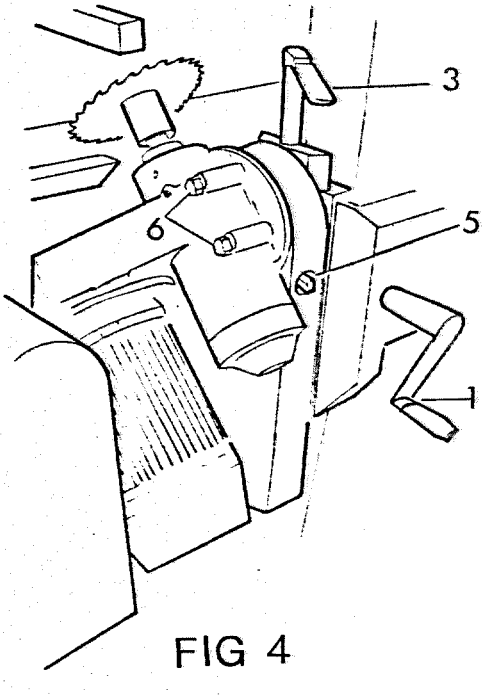


FIG 4

UNIVERSAL HEAD ADJUSTMENTS

UNIVERSAL HEAD DRIVE - BELT REPLACEMENT

TO REMOVE BELT

1) Remove screws (A) and cover (B).

2) Remove screws (C) then screws (D) from the rear bearing assembly (E).

3) Remove screws (N) and retaining ring (O).

4) Remove nut (P) from the spindle then replace retaining ring (O) to hold the bearings.

5) Remove screws (M) and cover (L).

6) Remove two screws (K) from taper-lock bush (J).

7) Use one of these screws (K) in the third hole to jack off the taper lock bush (J).

8) Disengage belt (F) from pulley and remove pulley (H).

9) Move belt (F) off the motor spindle and form a loop in the spindle housing and then remove the spindle from the rear of the spindle housing.

10) Withdraw the belt through the motor drive cavity.

TO FIT NEW BELT

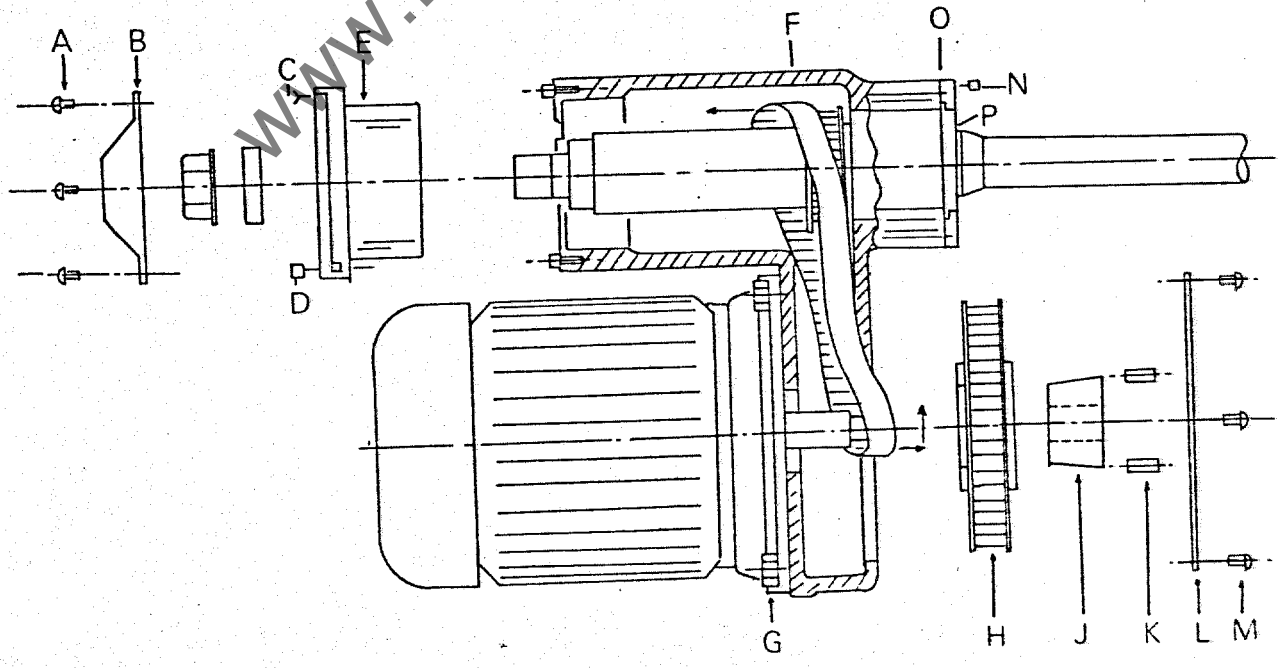
11) Reverse the above procedure.

NOTE: When replacing the spindle ensure the bearing and spacers are not damaged and are correctly positioned.

12) Before cover (L) is replaced, it may be found necessary to adjust the tension in the belt. (The belt should not be too tight, not too loose). When one side of the belt span is depressed, it should deflect approximately 3mm. (5/32in.).

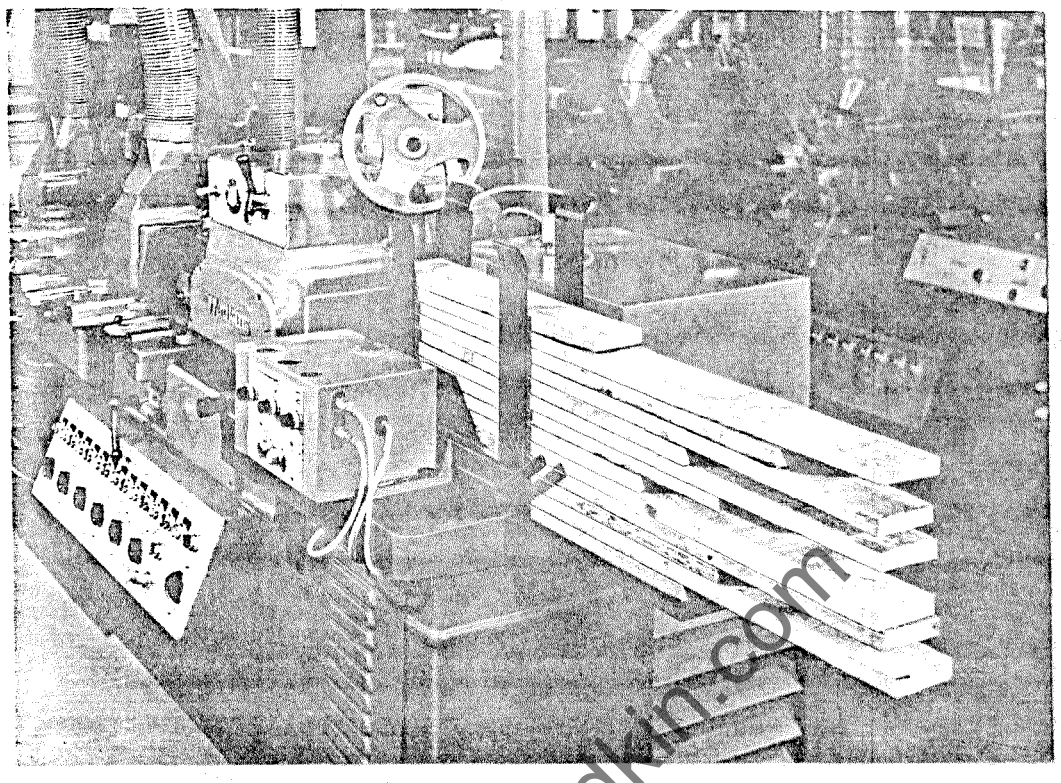
To tension the belt, slacken off four bolts (G) and move motor mounting plate.

NOTE: Once the belt tension is set correctly, it will not require retensioning.



APPENDIX 'B' JOINTING (WITHDRAWN 8.3.76)

APPENDIX 'C' HOPPER FEED UNIT



Principal Dimensions and Capacities.	75mm x 300mm	3in x 12in
Minimum section of workpiece	6 mm x 12 mm	1/4in x 1/2in
Minimum length of workpiece	300mm	12in
Maximum length of workpiece depends on weight and surface texture		
Infinitely variable feed speed range	12 - 60 m/min	40-200 ft/min
Horsepower of feed motor	3/4 - 1.1/2	
Speed of feed motor	750/1500 r.p.m.	

HOPPER FEED UNIT

General Description

The unit is made up of two quite independent sections carrying the adjustable guide plates and fences. The front section consists of two idling polyurethane faced rollers which are operated pneumatically by a signal transmitted from a photo cell. Pressure regulators for each of these rollers and the air clutch of the rear unit along with start and stop buttons are all mounted on the front unit for ease of access The front unit carries a fence and two hopper guide plates one being fixed and one adjustable horizontally for timber length being fed. The whole of this unit is adjustable for timber width and is covered to prevent entry of dust by its own sheet iron cover, this unit carries the light source of the photo electric unit.

The rear section consists of a 2 speed motor driving through variable speed pulleys to a wormbox which is fitted with a pneumatic slipping clutch, sprockets and duplex chain drive to main driving rollers, the rollers are knurled steel for maximum traction with minimum wear, the chain drive is adjustable for tension by means of a jockey sprocket having an eccentric adjustment, this rear unit also has a fence and two hopper guide plates both of which are adjustable vertically for timber thickness and one adjustable horizontally for timber length. This unit also carries the photo cell receiver and the selection switch for the two motor speeds. The whole of the rear unit is mounted on its own baseplate which is in turn mounted directly to the machine table top, the unit again being covered against ingress of dust by its own sheet iron cover.

INSTALLATION.

The unit is primarily designed for mounting direct on the machine table top of planing and moulding machines, but could be adapted to suit other machines such as multi-rip-saws and machines having power feed attachments as it is mounted directly onto the machine table top it usually requires only the fixing holes to be drilled and tapped in their correct location for the unit and its mounting brackets. Where it is impractical to fit the unit on to a machine table top, it can be fitted to a free standing unit at the end of a machine. (See later sections for particular machine applications). An outfeed table support may also be fitted as an extra to special order only.

The rear section of the unit is mounted on the infeed table, the fence line being set 1/16in. behind fixed fence line of the machine to allow for rollers, which protrude through the rear section fence to form the fence line when adjusted by means of the screw and nuts device fitted. Although the rollers are independently adjusted, care should be taken to ensure that the rear section fence is parallel through its length with the machines fixed fence line as all further positioning is taken from rear section fence position.

The front unit is also mounted on the infeed table and is adjustable for timber width by means of elongated slots and nuts; the fixing holes are drilled and tapped to allow for full movement. It is important that the fence line of the front unit is adjusted to be parallel with rear unit fence line, and that the light projector and the photo-cell receiver are in alignment, as this is essential for the efficient working of the unit.

All air piping and electronic wiring are completed before leaving the factory and it only remains to connect the unit to suitable supply sources after checking the following details.

Main air supply to be	80 p.s.i.	(Minimum 60 p.s.i.)
Clutch	25 p.s.i.	
1st Roller	40 p.s.i.	These are variable in use dependent on timber section.
2nd Roller	20 p.s.i.	

When connecting to electrical supply check voltage, phase and frequency on machine plate for the unit, ensure all connections are secure and the correct fuses are used. Check the rotation of the drive roller on the rear section, when viewed from the front and above these should rotate clockwise, reverse any two line lead connections to reverse rotation (3 phase).

Adjustments

Motor Belt Tension

This belt tension is adjusted and tested before leaving the factory, although it is not anticipated that it should require resetting, this can be achieved by movement of the sliding base.

Polyurethane Drive Rollers and Idling Rollers

The main drive rollers are adjusted to protrude beyond the unit's fence by 1/16 in which will bring them into line with machines fixed fence line by means of the dual nuts and screw device. Because of the slipping clutch these rollers should not experience a great deal of wear, but should they need replacing the units should be removed from the machine, the retaining grub screws unlocked and the rollers slipped off their shafts and replaced by new.

Chain Tension.

This should be checked monthly and is adjusted by the eccentric device on the jockey sprocket.

Hopper Guide Plates.

Each of the adjustable guide plates has individual clamping handles for each movement required, these handles should be unlocked, guide plate positioned and handles relocked securely.

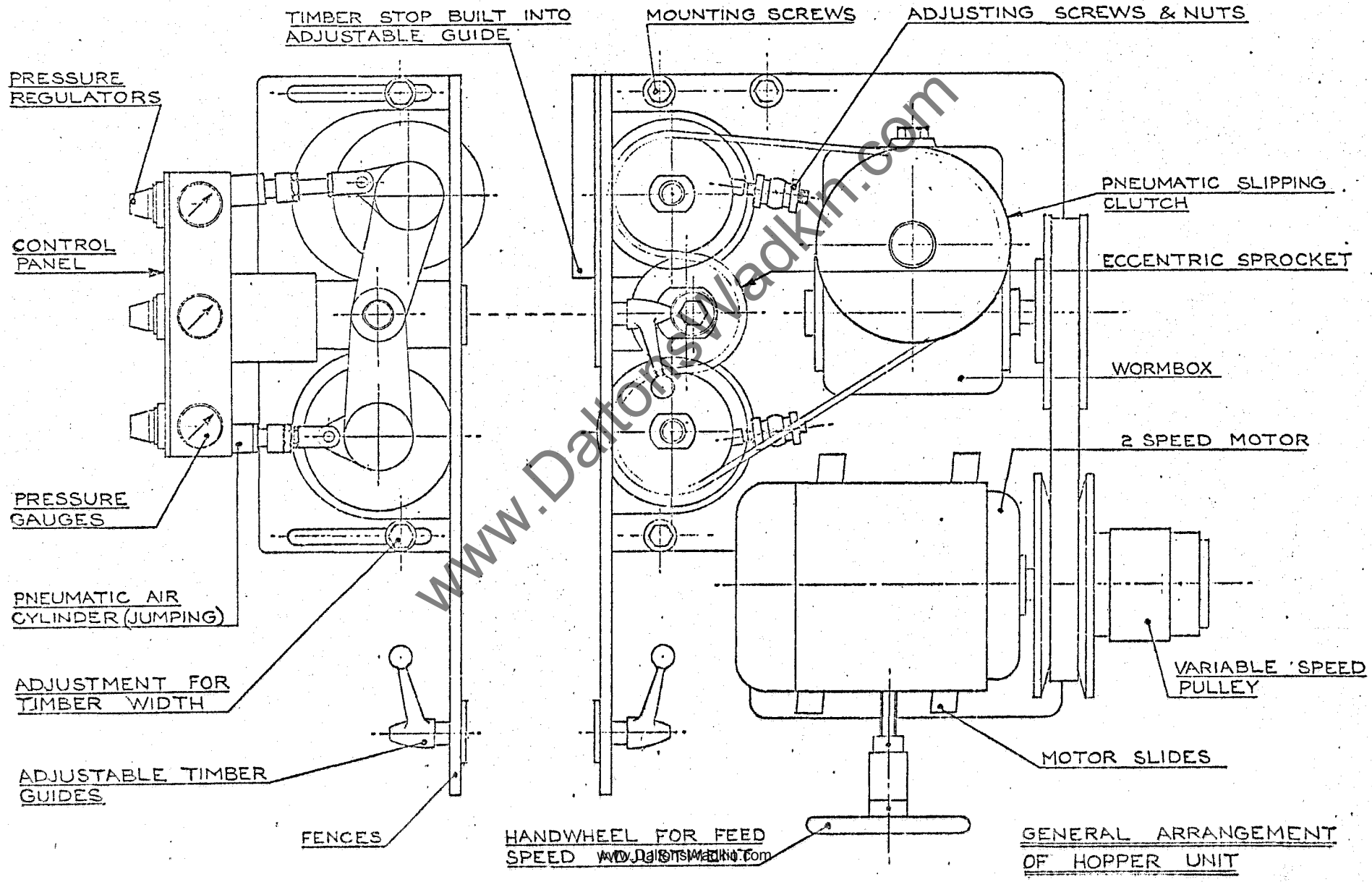
Pressure to Rollers and Clutch

The pneumatic pressure applied by the rollers and also the amount of slip at the clutch can be adjusted from the front of the machine by adjustment of the pressure regulators mounted on the control panel, there is one for each roller and one for the clutch, this pressure should be adjusted to give the best traction of timber through the unit, with minimum pressure at the clutch, this would depend on weight and section of timber being fed.

Variable Speed Pulleys

The infinitely adjustable pulleys speed range is effected by rotation of the hand wheel at the motor slide end, this gives either an increase or decrease in speed depending on direction of rotation of handwheel, further speed range is operated by selecting the second of the motors two speeds.

Speeds are within the range of 40/200 ft/min. and the unit is adjusted to run at 30-50% faster than main machine feed to ensure an uninterrupted feed through the machine.



GENERAL ARRANGEMENT OF HOPPER UNIT

Setting for Operation

The hopper guide plates are adjusted so that they are closer together than the minimum length of timber being fed by movement horizontally after clamping handle has been unlocked, guide plates must also be set to timber thickness by movement vertically also after unlocking clamp handles, when guide plates are set these handles must be locked firmly. The pressure to the pneumatically operated rollers and the clutch is adjusted depending on the timber sections being fed, to give the best traction with minimum pressure at the clutch, the unit being adjusted to run at 30-50% faster than main machine to keep a continuous flow of timber through the machine, the pieces being butted end to end. The machine can be used conventionally by removing the front section of the hopper unit or alternatively opening it to its maximum to prevent fouling hand fed timber lengths.

The main machine and the hopper unit are switched to run after the hopper has been filled with timber and this will be fed into machine until supply is exhausted.

Maintenance

Daily:- The orifices for the light projector and the photo-cell receiver should be blown free of dust.

Weekly:- Remove rear unit cover to perform the following:-

1 - oiler on chain tensioner sprocket also main sprockets and chain require oiling.
Adjusting screws and nuts of main drive rollers require oiling.
1 - oiler on each of the motor slides for variable speed adjustment, at the same time the variable speed unit must be operated through its full speed range to prevent sticking during operation and maintain an oil film over the entire surface of the slides.
1 - oiler in clutch top spindle bearing.

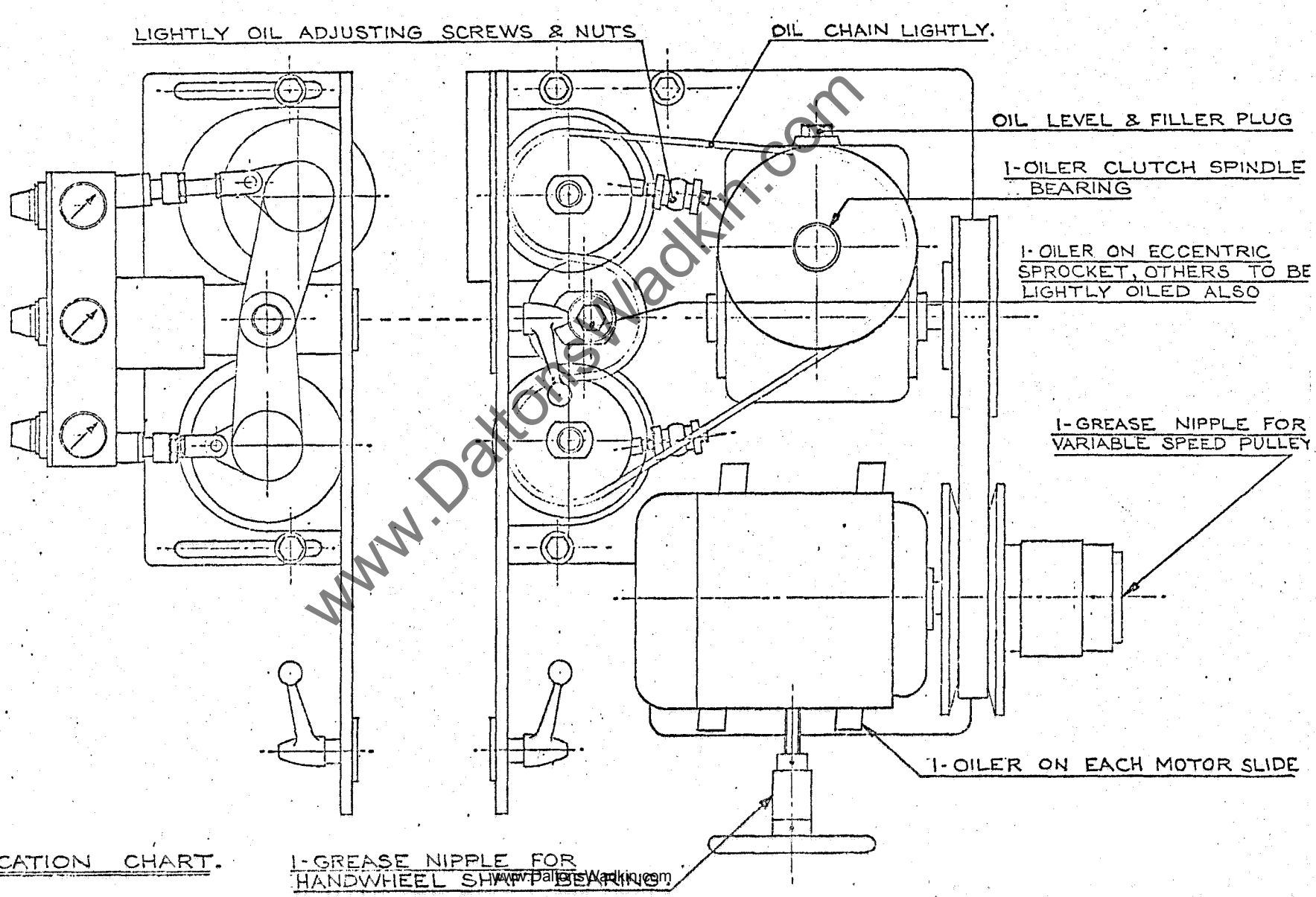
Monthly:- Remove rear unit cover to perform the following:-

1 - grease nipple in variable speed handwheel shaft.
1 - grease nipple in variable speed pulley
Check oil level in wormbox fill to level by removing filler cap and level bung and topping up with oil until it just runs out at level bung position, this indicates box is full, replace filler caps and level bung.
Check belt and chain tensions, adjust if necessary.

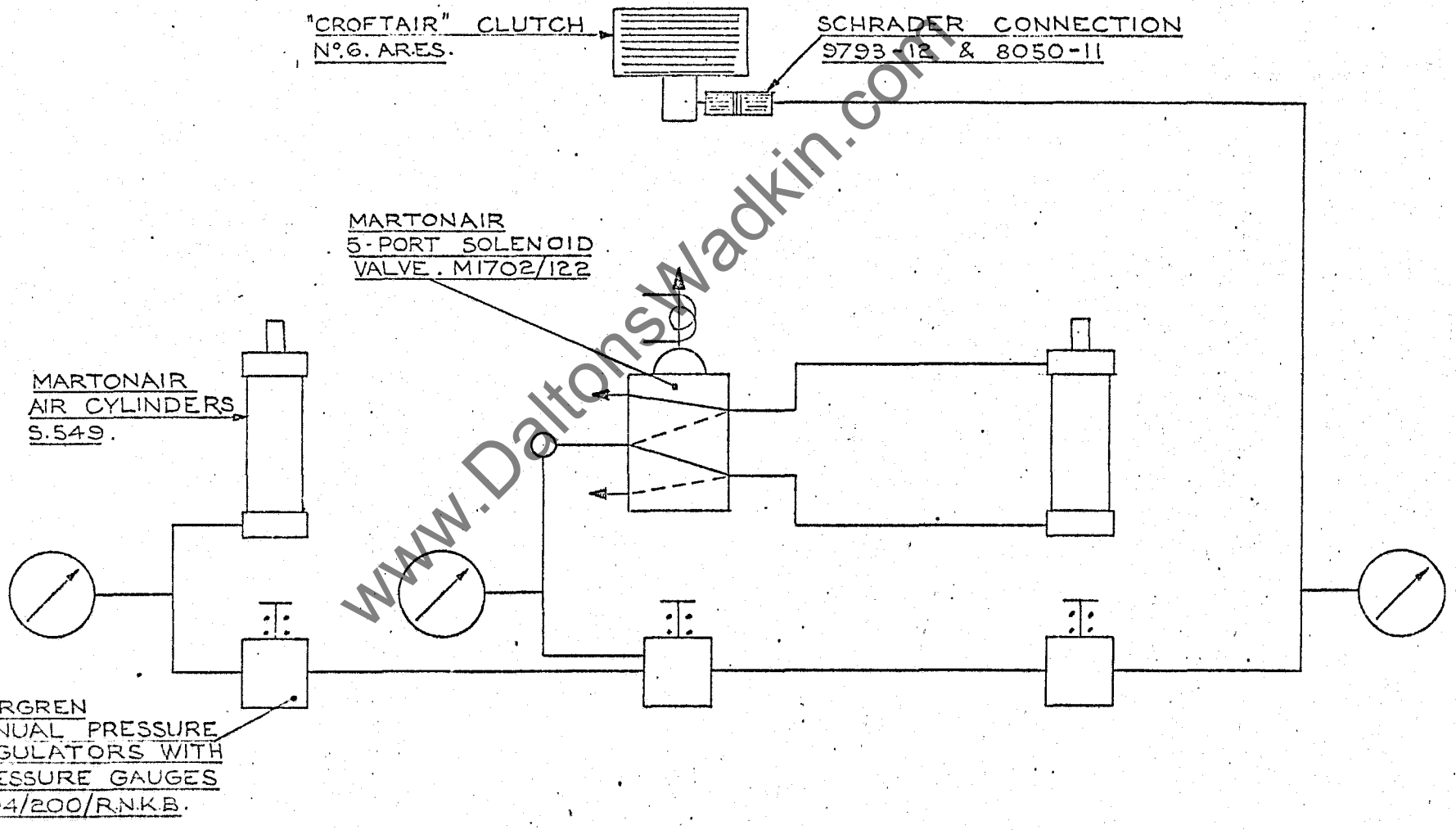
All other bearings are sealed for life and require no further lubrication up to replacement. The bushes are of the self lubricating type and do not require oiling, they may be replaced when worn.

It must be pointed out that this maintenance is additional to any carried out on the main machine to which the unit is fitted.

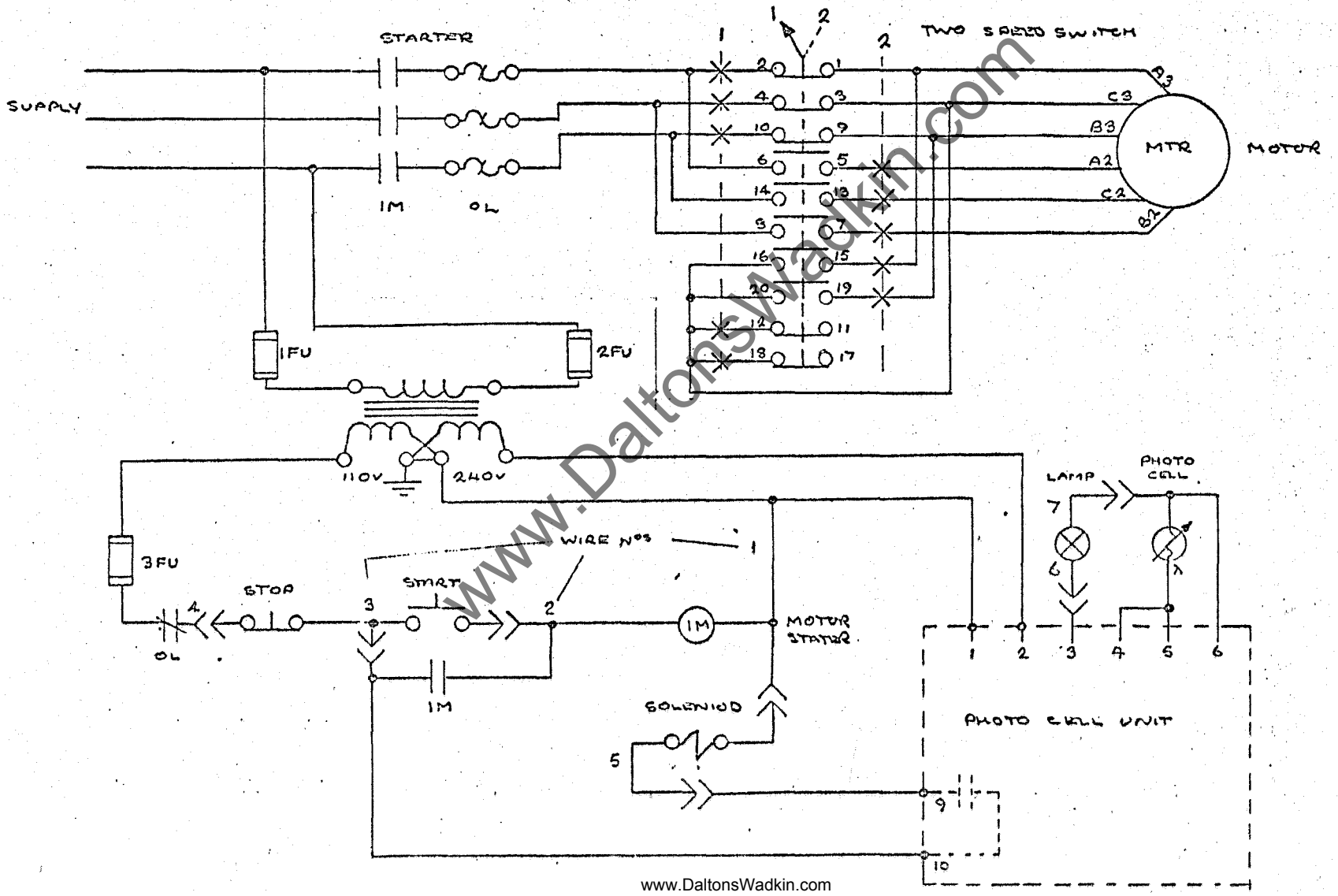
Replacement of either light projector or photo-cell requires unit removing from machine. The grubscrews on the underside which retain projector and cell in position require unlocking and the units concerned slipped out of the orifice and replaced with new. The life of the bulb is about 2000 hrs. under normal running operations but is not guaranteed.



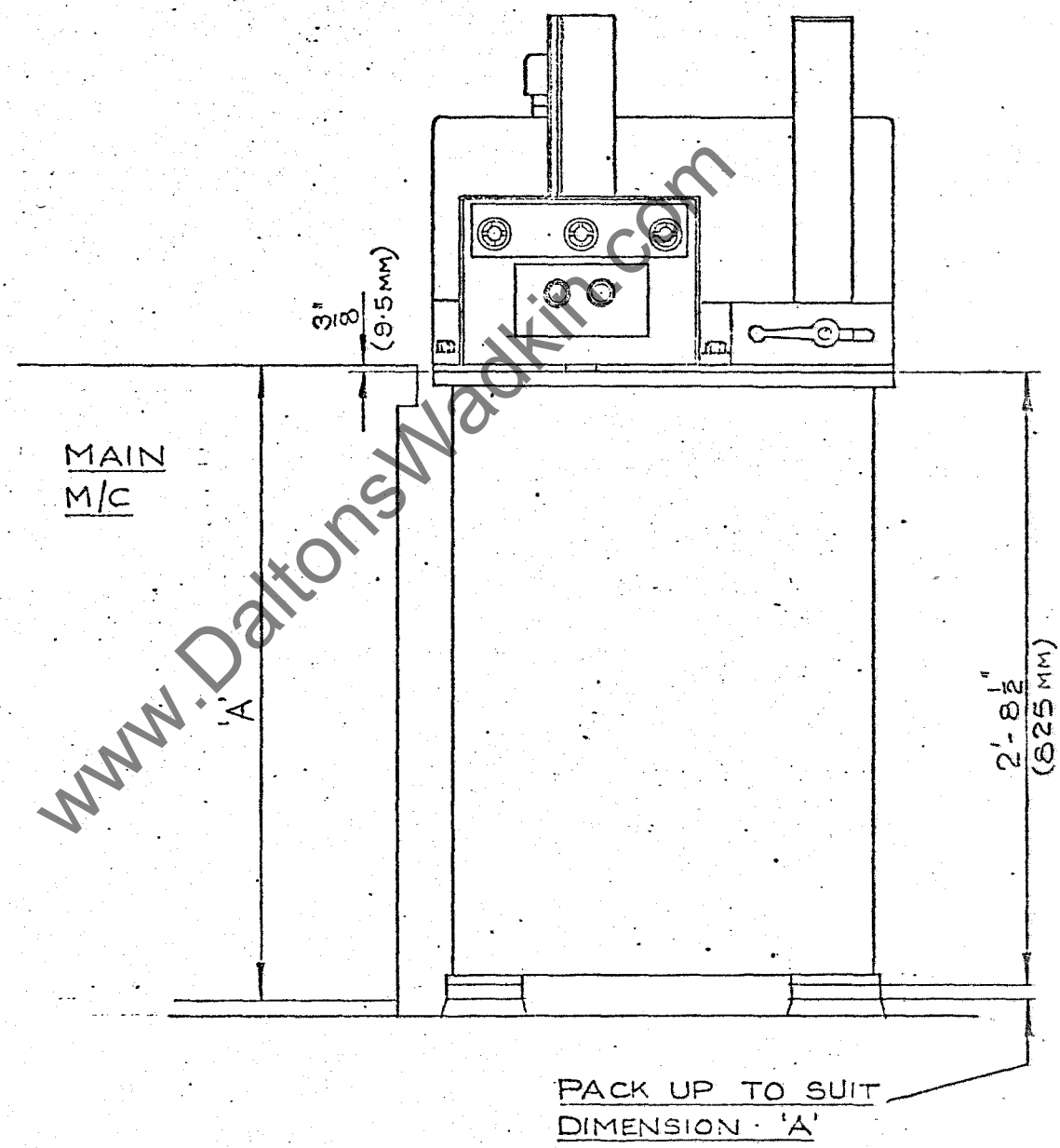
LUBRICATION CHART.



H.F.U. HOPPER FEED — SCHEMATIC AIR CIRCUIT DIAGRAM



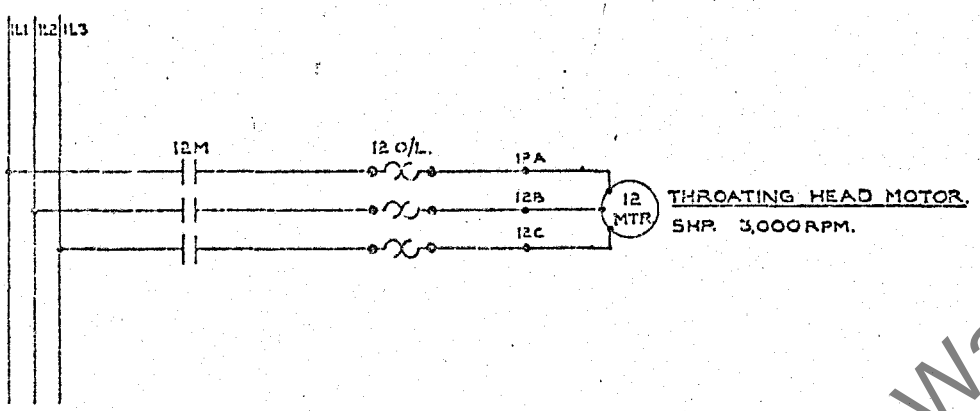
H F U CIRCUIT DIAGRAM

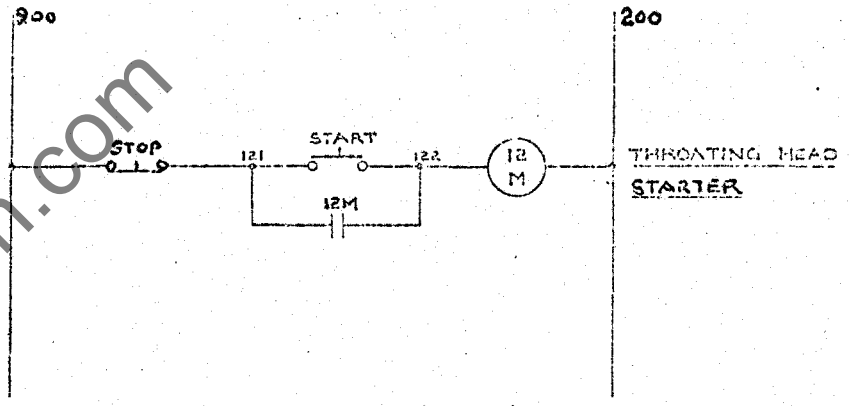


FREE STANDING HOPPER FEED UNIT

APPENDIX 'D' THROATING HEAD

D1 D 2078





THIRD ANGLE PROJECTION

WADKIN LTD. LEICESTER

F	F	D	C	B	DATE 9/10/73	A

DRN. BY

CHKD BY

DESCRIPTION: THROATING HEAD FOR FB, FDB

QTY

PART NO. D. 2078

VERTICAL THROATING HEAD

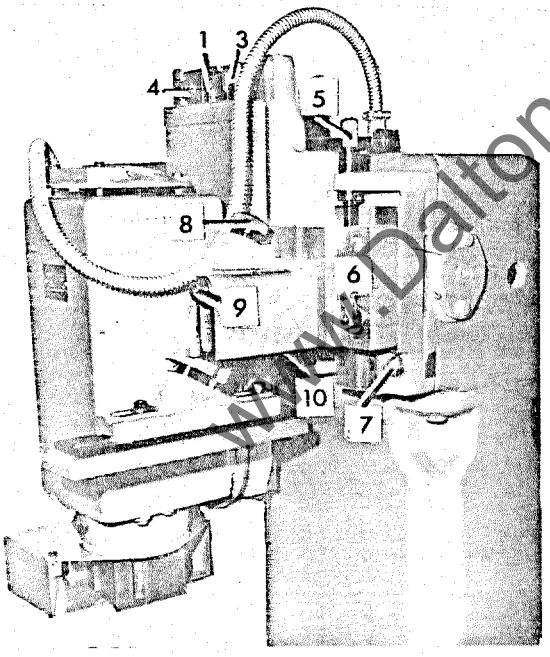
The vertical throating head is a free standing unit designed to stand at the outfeed end of the machine. It is equipped with a 5hp, 2,800 r.p.m. squirrel cage induction motor complete with direct on line contactor starter having no volt and three overload releases and self contained start and stop push buttons.

Vertical traverse 8in can be moved in increments of .005in (0.125mm)

1 complete revolution of Traverse Handle	= 0.125 in.
Canting movement	= 90° max. either side of the vertical. Scale graduated in 1/2° increments.
Bed movement (Horizontal)	= 35.1/2in.
Throat lateral movement	= 16 in.

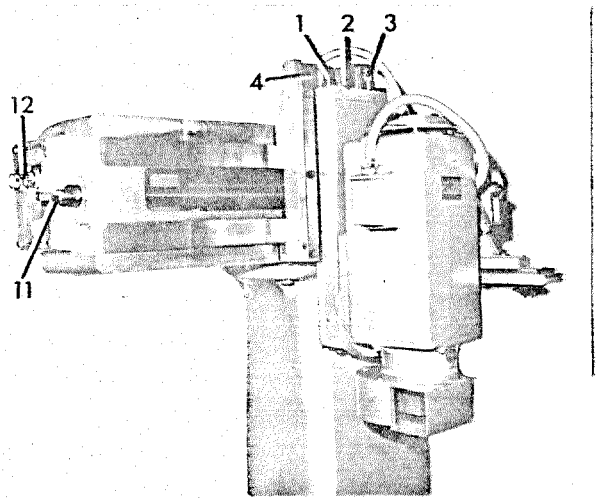
A top pressure unit is provided to fit on the "V" slide either side of the head. Vertical movement is via crank handle with a locking nut on the R.H. side. A wedge lock holds lateral position on the slide.

Lubrication:- Grease nipples are provided at each of the motor bearings. Horizontal screw is provided with an oiler at each end of the screw. The vertical and canting screws should have light oil lubrication.



ADJUSTMENTS

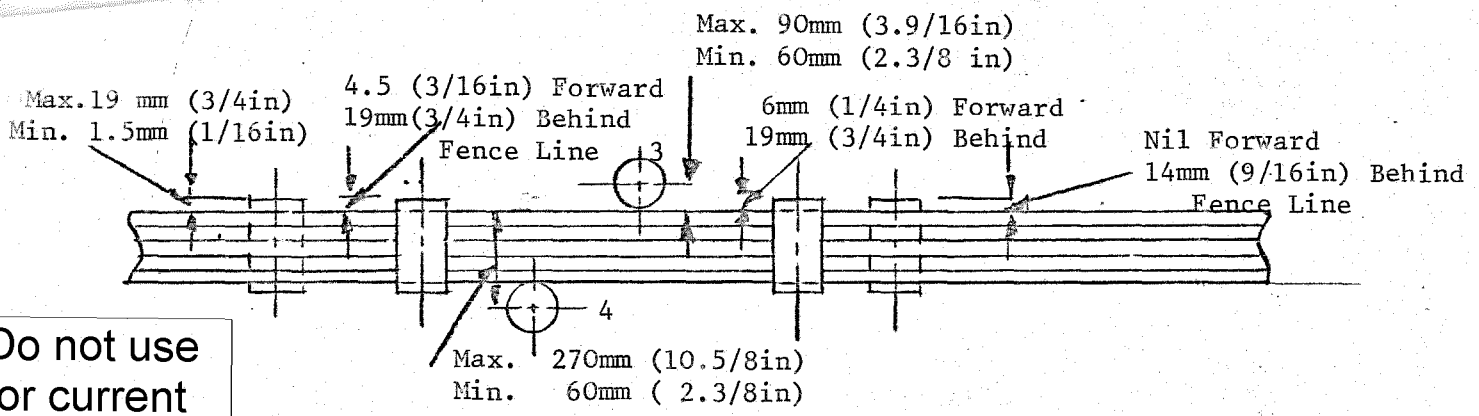
1. Cant
2. Vertical (Head)
3. Cant Lock
4. Vertical Lock Nut (Head)
5. Vertical (Pressure)
6. Vertical Lock Nut (Pressure)
7. Horizontal (Pressure) Lock
8. Pressure Spring Adjustment
9. Pressure Holding Nut (Not Adjustment)
10. Horizontal Lock Nut
11. Horizontal (Head)
12. On/Off Pushbuttons.



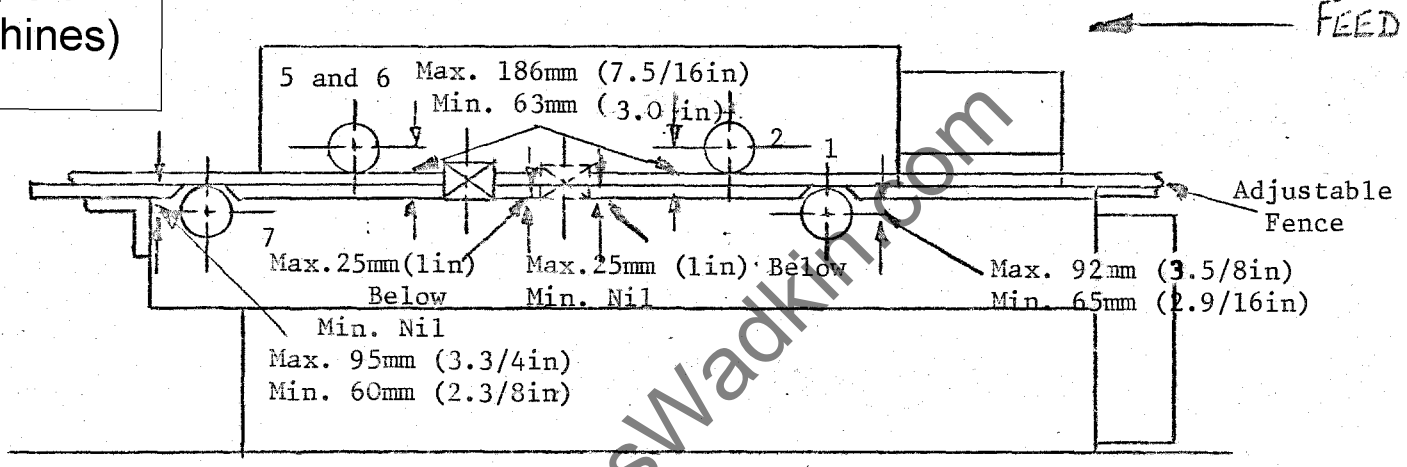
December '73

APPENDIX 'E' OPERATING AND MAINTENANCE

... FDB CAPACITY CHART

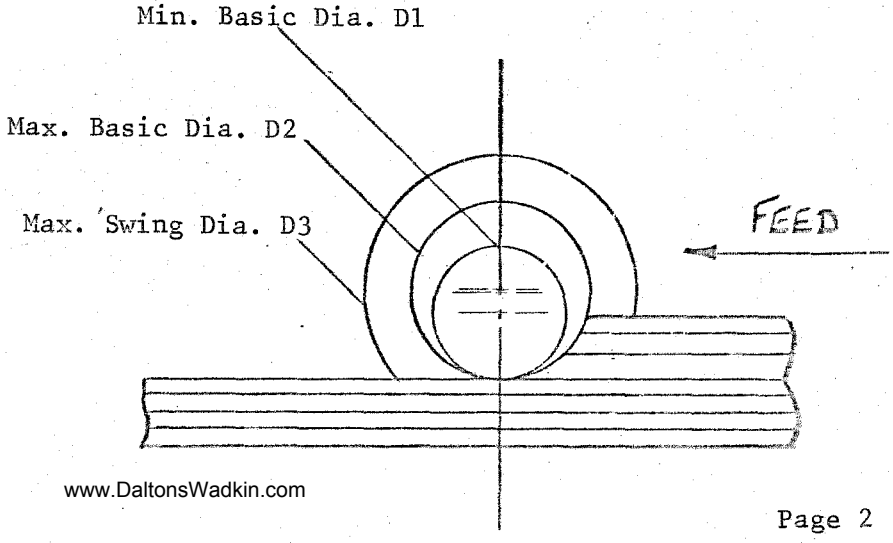


Do not use for current machines (only old machines)



	7		5 and 6		4		3		2		1	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
D1	120	4.3/4	120	4.3/4	120	4.3/4	120	4.3/4	140	5.1/2	140	5.1/2
D2	178	7	160	6.1/4	165	6.1/2	165	6.1/2	160	6.1/4	178	7
D3	254	10	228	9	216	8.1/2	216	8.1/2	228	9	190	7.1/2

Heads 1-6 Wadkin
Circular Cutterblock
Cutting Circle 140mm
(5.1/2in) Dia.
Square Cutterblock
Cutting Circle 152mm
(6in) Dia.

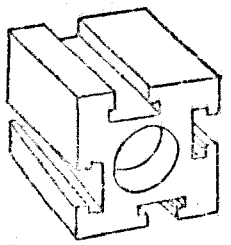


Cutter Equipment
for
5"x 3" Planing and Moulding Machine
type FDB

A range of cutters and cutter equipment has been designed for use with this machine and is listed in the following pages.

The equipment listed is our standard range and we welcome enquires for special items, please send sample moulds or dimensioned drawings when special cutters are required.

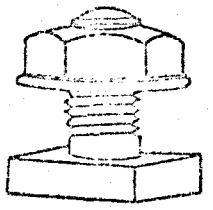
SQUARE CUTTER BLOCKS 9000 R. P. M. MAX.



These cutterblocks are specially made for the Wadkin Moulder. They are of the self centring type with cone ends, accurately machined and balanced, and have tee slots to take square-headed bolts.

$3\frac{5}{8}$"(92.1mm) Square x 6"(152mm) Dia. Min. Cutting Circle for 40mm Dia. Spindles

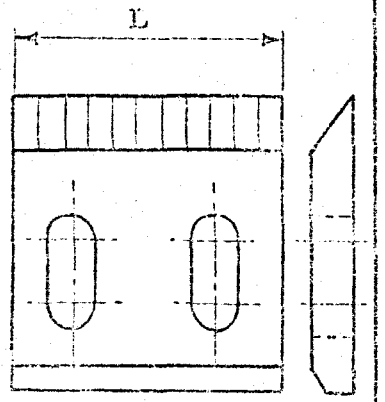
Length	No. of Bolts	Part No.
$3\frac{1}{2}$"(90mm)	6	FBC 510
$4\frac{1}{2}$"(115mm)	8	FBC 538
$5\frac{1}{2}$"(140mm)	8	FBC 506
6"(152mm)	8	FWT 9 for universal head only.
$2\frac{1}{2}$"(64mm)	4	FBC 542 " " " "



SQUARE HEADED CUTTER BLOCK BOLTS FOR ABOVE BLOCKS COMPLETE WITH NUTS AND WASHERS

For $3\frac{5}{8}$"(92.1mm) Square Blocks

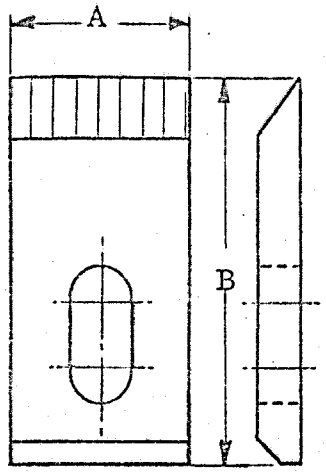
Part No. .. .. FCT 34



H. S. S. on I. CHIPPING IRONS FOR SQUARE CUTTER BLOCKS

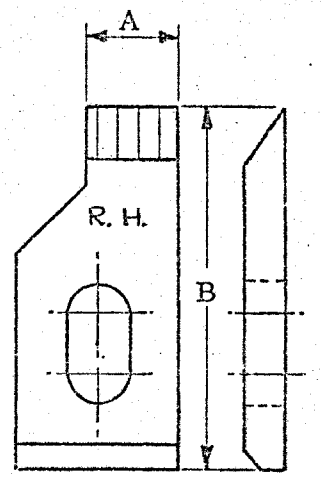
Length (L)	No. of Slots	Part No.
$2\frac{1}{2}$"(63mm)	one	FCT 57
$4\frac{1}{4}$"(107mm)	two	FCT 58
$3\frac{5}{8}$"(90mm)	two	FBC 513
$4\frac{1}{2}$"(115mm)	two	FBC 515
$5\frac{1}{2}$"(140mm)	two	FBC 514
$6\frac{1}{2}$"(165mm)	three	FCT 59

CUTTERS FOR SQUARE CUTTERBLOCKS



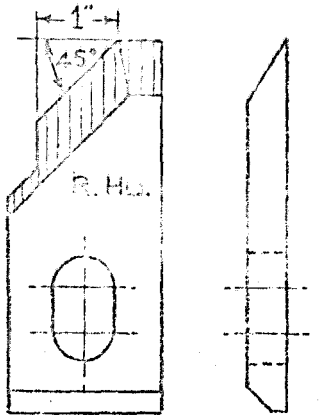
Dimension A	Dimension B	No. of Slots	Part No.	Max. Speed
2"(50mm)	4½"(114mm)	One	158	9000 R. P. M.
2½"(63mm)	4½"(114mm)	One	159	9000 R. P. M.
4"(101mm)	4½"(114mm)	Two	162	9000 R. P. M.
3"(76mm)	4 1/16"(103mm)	One	151	9000 R. P. M.
2"(50mm)	5"(127mm)	One	165	7500 R. P. M.
2½"(63mm)	5"(127mm)	One	166	7500 R. P. M.
4"(101mm)	5"(127mm)	Two	169	7500 R. P. M.
1½"(38mm)	5½"(139mm)	One	170	7500 R. P. M.
2"(50 mm)	5½"(139mm)	One	171	7500 R. P. M.
2½"(63mm)	5½"(139mm)	One	172	7500 R. P. M.

HANDED CUTTERS



Dimension A	Dimension B	Part No. R. H.	Part No. L. H.	Max. Speed
½"(12mm)	4½"(114mm)	149	150	9000 R. P. M.
¾"(19mm)	4½"(114mm)	152	153	9000 R. P. M.
1"(25mm)	4½"(114mm)	154	155	9000 R. P. M.
1½"(38mm)	4½"(114mm)	156	157	9000 R. P. M.
3"(76mm)	4½"(114mm)	160	161	9000 R. P. M.
1½"(38mm)	5"(127mm)	163	164	7500 R. P. M.
3"(76mm)	5"(127mm)	167	168	7500 R. P. M.

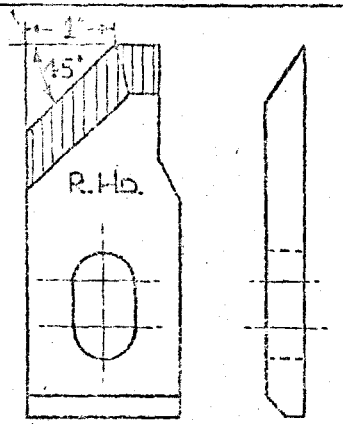
BEVELLED CUTTERS 7500 R. P. M. Max.



Part No. R. H. 180

Part No. L. H. 181

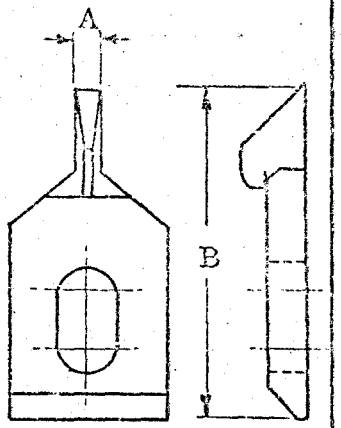
BEVELLED CUTTERS (Continued) 7500 R. P. M. Max.



Part No. R. H. 182

Part No. L. H. 183

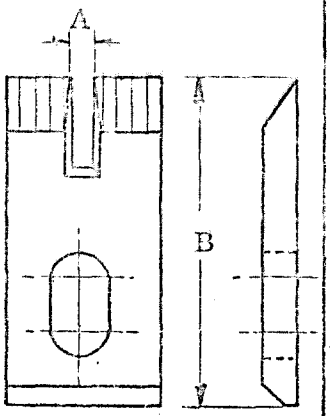
GROOVING CUTTERS 9000 R. P. M. Max.



Dimension A	Dimension B	Part No. Central	Part No. R. H.	Part No. L. H.
$\frac{1}{8}$"(3.18mm)	$4\frac{1}{2}$"(114mm)	701	701 R	701 L
$\frac{3}{16}$"(4.76mm)	$4\frac{1}{2}$"(114mm)	702	702 R	702 L
$\frac{1}{4}$"(6.35mm)	$4\frac{1}{2}$"(114mm)	703	703 R	703 L
$\frac{5}{16}$"(7.94mm)	$4\frac{1}{2}$"(114mm)	704	704 R	704 L
$\frac{3}{8}$"(9.53mm)	$4\frac{1}{2}$"(114mm)	705	705 R	705 L

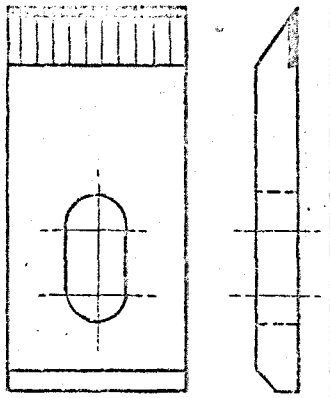
N. B. Grooving cutters can be supplied with cutting edge, right hand, left hand, or central.

CUTTERS FOR SQUARE CUTTERBLOCKS (Continued)



TONGUING CUTTERS 9000 R. P. M. Max.

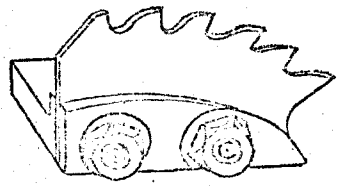
Dimension A	Dimension B	Part No.
$\frac{1}{8}$"(3. 18mm)	$4\frac{1}{2}$"(114mm)	711
$\frac{3}{16}$"(4. 76mm)	$4\frac{1}{2}$"(114mm)	712
$\frac{1}{4}$" (6. 35mm)	$4\frac{1}{2}$"(114mm)	713
$\frac{5}{16}$"(7. 94mm)	$4\frac{1}{2}$"(114mm)	714
$\frac{3}{8}$"(9. 53mm)	$4\frac{1}{2}$"(114mm)	715



TUNGSTEN CARBIDE TIPPED CUTTERS

This class of cutter is in increasing demand for machining difficult hardwoods such as Jarrah and Teak, on which satisfactory runs cannot be obtained with high speed steel or similar cutters. Although more costly than other types of cutter, the savings effected by the elimination of constant stoppages of high production machines for regrinding cutters, make them an economical proposition. Their principle characteristic is the extreme hardness of the Tungsten Carbide tip enabling continuous runs to be made on the most difficult materials without resharpening.
All the flat cutters in this catalogue can be supplied with Tungsten Carbide tips on request.

COXCOMB CUTTERS AND BRACKETS 7500 R. P. M. Max.



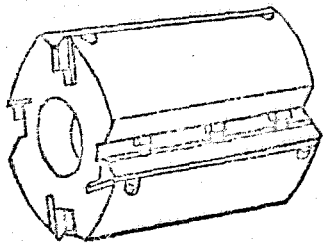
R. H. Bracket

Standard Coxcomb Cutters (in pairs) for $3\frac{5}{8}$"(92. 1mm) sq. block ..... Part No. FCT 339

Right Hand Brackets (in pairs) .. .. Part No. FCT 340

Left Hand Brackets (in pairs) .. .. Part No. FCT 341

CIRCULAR CUTTERBLOCKS (WEDGE TYPE) 9000 R. P. M. MAX.



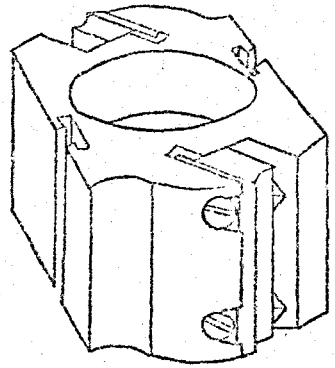
These cutterblocks have a $5\frac{1}{2}$"(140mm) diameter cutting circle and are supplied complete with high speed steel cutters.

Four knife for 40mm dia. Spindles

Length	Part No.
$3\frac{1}{2}$"(90mm)	FBC 508
$4\frac{1}{2}$"(115mm)	FBC 502
$5\frac{1}{2}$"(140mm)	FBC 504

CIRCULAR CUTTERBLOCKS FOR THE UNIVERSAL HEAD

Length	Part No.	Spare Cutters
$8\frac{1}{8}$"(206mm)	FWT 8	FWT 4
6"(152mm)	FWT 6	FWT 3

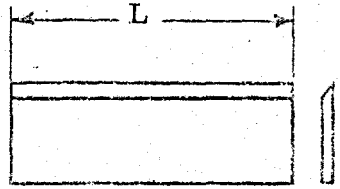


COMBINED MOULDING AND THIN KNIFE BLOCK 9000 R. P. M.

This block provides the means of using standard square block moulding irons on a circular block without reducing its efficiency. The moulding irons can be used at the same time as the planing knives and thus save an additional head on certain types of work. The thin knives are secured by wedges.

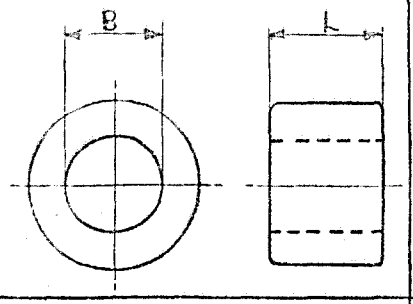
6"dia. (152mm) min. Cutting Circle for 40mm dia. Spindles

Length	Part No.
$3\frac{1}{2}$"(90mm)	FBC 540
$5\frac{1}{2}$"(140mm)	FBC 511



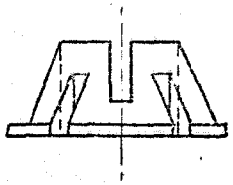
SPARE H. S. S. CUTTERS FOR THE ABOVE CUTTERBLOCKS

Length (L)	Part No.
$3\frac{1}{2}$"(90mm)	FBC 517
$4\frac{1}{2}$"(115mm)	FBC 519
$5\frac{1}{2}$"(140mm)	FBC 521



MAKING UP COLLARS

Bore (B)	Length (L)	Part No.
40mm dia.	1"(25mm)	FBC 526
40mm dia.	2"(50mm)	FBC 525
40mm dia.	25/64"(10mm)	FBC 527

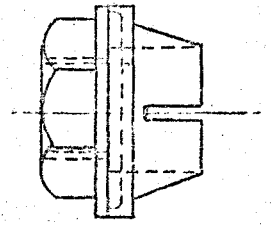


CONED COLLARS

These are supplied with the machine, one for each 40mm dia. spindle and used with all standard cutterblocks and mounting sleeves.

For 40mm dia. Spindles

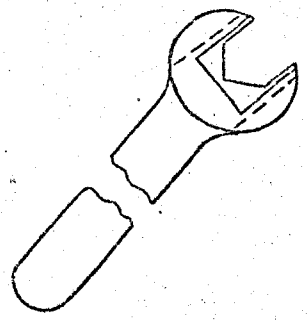
Part No. FAC 13



COMBINED LOCKNUT AND CONE FOR UNIVERSAL HEAD

By combining the locknut with the cone, the cone is automatically withdrawn from the cutter block when the spindle locknut is unscrewed. The cone is self aligning and able to rotate independent to the locknut.

Length of Block	Part No.
6"(152mm)	FWT 34



COMBINED LOCKNUT SPANNER (FOR 40mm SPINDLES ONLY)

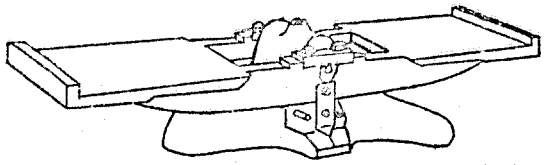
This spanner is for use when the machine operator is not in possession of the above combined locknuts and cones.

Part No. FBC 58

LOCKNUT SPANNERS

Box Spanner QT 66 for Universal Head Spindle.

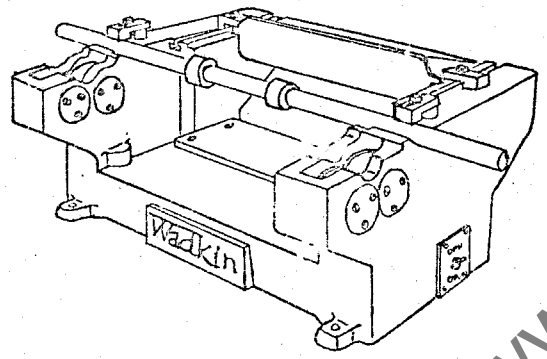
CUTTER BALANCER



The high cutting speeds of the Wadkin FDB type moulder make it essential that all cutters are in proper balance. The balance of any pair of cutters can be ascertained with accuracy on this unit.

Part No. KS

COMBINED SETTING AND BALANCING STAND F. D. T.



For efficient working of any high speed machine it is essential that all cutters are both accurately set and balanced. This is particularly important with a multi-head machine such as the Wadkin moulder.

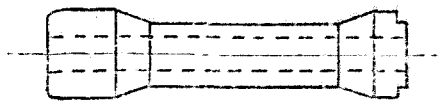
The combined setting and balancing stand illustrated has been specially designed to meet these requirements.

The stand is entirely self-contained. The knife-edged balancing rollers are mounted between ball bearings for frictionless operation. The rollers are shrouded in the stand to give protection against accidental damage to knife edges. Aluminium scribing plate is reversible and can be turned top to bottom thus giving four edges from which the moulds can be scribed. The base of the stand houses two electric lamps to illuminate the blocks and thus facilitates accurate setting.

A 1"diameter arbor F. D. T. 215 is required to take the sleeve for mounting the FDB cutterblocks.

When ordering this stand please state voltage of lighting supply.

SLEEVE AND BALANCING SLEEVE

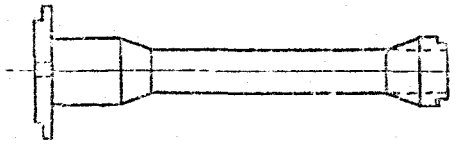


Sleeve complete with locknut making up collar and coned collar for use with the FDB cutterblocks.

For 40mm diameter bore equipment Part No. FDT 582

Coned Collar for use with above for Universal Blocks NH 919

GRINDING ARBOR

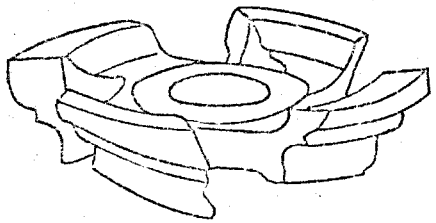


Arbor complete with coned collar making up collar and locknut for FDB cutterblocks for use on the Wadkin Universal Grinding Machine NH.

For 40mm diameter bore equipment Part No. NH739

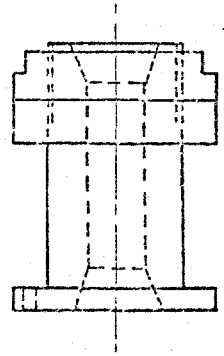
For Universal Blocks Part No. NH921

SOLID PROFILE CUTTERS



Their use ensures quick set ups and guarantees a high standard of quality. With this type of cutter the profile remains unaltered by resharpening, and the uniformity of the pattern is retained during the entire life of the cutter.
Cutters for tonguing and grooving can be supplied to give tight or loose fits, with square or tapered tongue and groove.
Prices and details on request. When enquiring please send drawing or sample mould and state method of working.

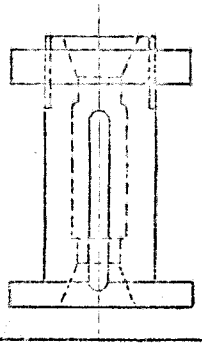
SOLID PROFILE CUTTER MOUNTING SLEEVE



Sleeve for 60mm bore solid profile cutter on near or fence side spindles, complete with making up collar and locknut.

Sleeve for 40mm diameter fence side spindle FAC 32

Sleeve for 40mm diameter near side spindle FAC 34

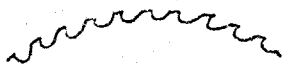


SLITTING SAW UNIT

SLEEVE FOR SLITTING SAW UNIT

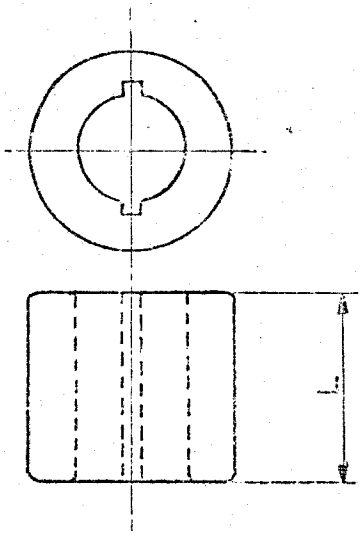
The slitting saw unit is supplied for use on the second bottom head and comes complete with locknut and spanner.

Sleeve complete for 40mm diameter spindles	Part No. FBC 534



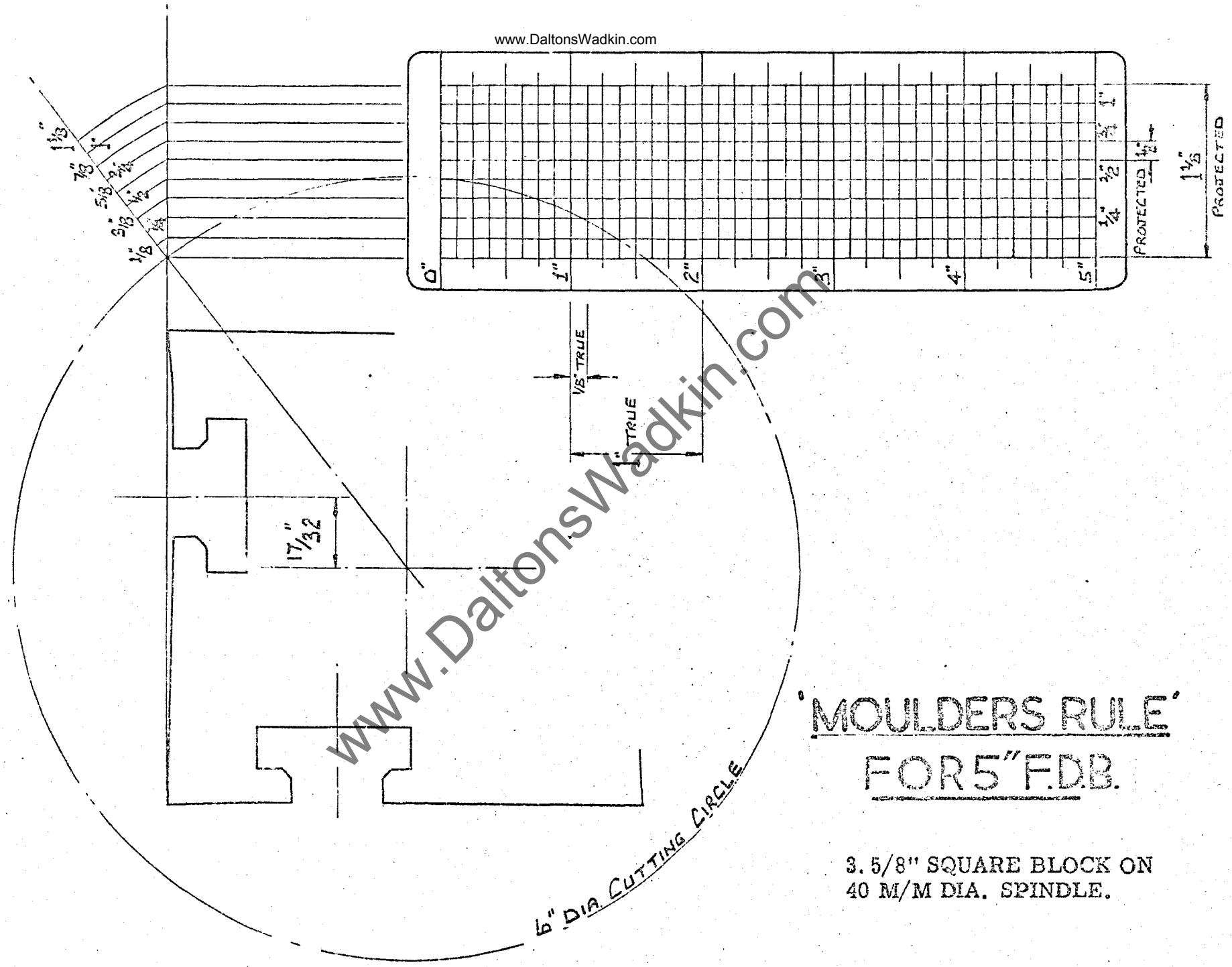
SAWS

10"(254mm) dia.	slitting saws for above sleeve, alloy	Part No. QS 153
10"(254mm) dia.	slitting saws for above sleeve, T. C. T.	Part No. QS 167
10"(254mm) dia.	planer slitting saws H. S. S. tipped	Part No. QS 352
10"(254mm) dia.	planer slitting saws T. C. T.	Part No. QS 351



SPACING WASHERS FOR SLITTING SAW UNIT

IMPERIAL	Length (L)	Part No.
	1/32"(0. 79mm)	FDT 728
	$\frac{1}{16}$"(1. 59mm)	FDT 729
	$\frac{1}{8}$"(3. 18mm)	FDT 733
	$\frac{1}{4}$"(6. 35mm)	FDT 734
	$\frac{3}{8}$"(9. 53mm)	FDT 735
	$\frac{1}{2}$"(12. 7mm)	FDT 736
	$\frac{3}{4}$"(19mm)	FDT 737
	1"(25mm)	FDT 738
	2"(51mm)	FDT 739



'MOULDERS RULE'
FOR 5" F.D.B.

3. 5/8" SQUARE BLOCK ON
40 M/M DIA. SPINDLE.

SPACING WASHERS FOR SLITTING SAW UNIT (Cont)

METRIC	Length (L)	Part No.
	2mm	FDT 1691
	3mm	FDT 1692
	4mm	FDT 1693
	5mm	FDT 1694
	10mm	FDT 1695
	15mm	FDT 1696
	20mm	FDT 1697
	25mm	FDT 1698
	50mm	FDT 1699

CONVERSION CHART

inches to millimetres

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	0,00	25,40	50,80	76,20	101,60	127,00	152,40	177,80	203,20	228,60	254,00	279,40	304,80	330,20	355,60	381,00
1/64	0,40	25,80	51,20	76,60	102,00	127,40	152,80	178,20	203,60	229,00	254,40	279,80	305,20	330,60	356,00	381,40
1/32	0,79	26,19	51,59	76,99	102,39	127,79	153,19	178,59	203,99	229,39	254,79	280,19	305,59	330,99	356,39	381,79
3/64	1,19	26,59	51,99	77,39	102,79	128,19	153,59	178,99	204,39	229,79	255,19	280,59	305,99	331,39	356,79	382,19
1/16	1,59	26,99	52,39	77,79	103,19	128,59	153,99	179,39	204,79	230,19	255,59	280,99	306,39	331,79	357,19	382,59
5/64	1,99	27,39	52,79	78,19	103,59	128,99	154,39	179,79	205,19	230,59	255,99	281,39	306,79	332,19	357,59	382,99
3/32	2,38	27,78	53,18	78,58	103,98	129,38	154,78	180,18	205,58	230,98	256,38	281,78	307,18	332,58	357,98	383,38
7/64	2,78	28,18	53,58	78,98	104,38	129,78	155,18	180,58	205,98	231,38	256,78	282,18	307,58	332,98	358,38	383,78
1/8	3,18	28,58	53,98	79,38	104,78	130,18	155,58	180,98	206,38	231,78	257,18	282,58	307,98	333,38	358,78	384,18
9/64	3,57	28,97	54,37	79,77	105,17	130,57	155,97	181,37	206,77	232,17	257,57	282,97	308,37	333,77	359,17	384,57
5/32	3,97	29,37	54,77	80,17	105,57	130,97	156,37	181,77	207,17	232,57	257,97	283,37	308,77	334,17	359,57	384,97
11/64	4,37	29,77	55,17	80,57	105,97	131,37	156,77	182,17	207,57	232,97	258,37	283,77	309,17	334,57	359,97	385,37
3/16	4,76	30,16	55,56	80,96	106,35	131,76	157,16	182,56	207,96	233,36	258,76	284,16	309,56	334,96	360,36	385,76
13/64	5,16	30,56	55,96	81,36	106,76	132,16	157,56	182,96	208,36	233,76	259,16	284,56	309,96	335,36	360,76	386,16
7/32	5,56	30,96	56,36	81,76	107,16	132,56	157,96	183,36	208,76	234,16	259,56	284,96	310,36	335,76	361,16	386,56
15/64	5,95	31,35	56,75	82,15	107,55	132,95	158,35	183,75	209,15	234,55	259,95	285,35	310,75	336,15	361,55	386,95
1/4	6,35	31,75	57,15	82,55	107,95	133,35	158,75	184,15	209,55	234,95	260,35	285,75	311,15	336,55	361,95	387,35
17/64	6,75	32,15	57,55	82,94	108,35	133,75	159,15	184,55	209,95	235,35	260,75	286,15	311,55	336,95	362,35	387,75
9/32	7,14	32,54	57,94	83,34	108,74	134,14	159,54	184,94	210,34	235,74	261,14	286,54	311,94	337,34	362,74	388,14
19/64	7,54	32,94	58,34	83,74	109,14	134,54	159,94	185,34	210,74	236,14	261,54	286,94	312,34	337,74	363,14	388,54
5/16	7,94	33,34	58,74	84,14	109,54	134,94	160,34	185,74	211,14	236,54	261,94	287,34	312,74	338,14	363,54	388,94
21/64	8,33	33,73	59,13	84,53	109,93	135,33	160,73	186,13	211,53	236,93	262,34	287,74	313,14	338,54	363,94	389,34
11/32	8,73	34,13	59,53	84,93	110,33	135,73	161,13	186,53	211,93	237,33	262,73	288,13	313,53	338,93	364,33	389,73
23/64	9,13	34,53	59,93	85,33	110,73	136,13	161,53	186,93	212,33	237,73	263,13	288,53	313,93	339,33	364,73	390,13
3/8	9,53	34,93	60,33	85,73	111,13	136,53	161,93	187,33	212,73	238,13	263,53	288,93	314,33	339,73	365,13	390,53
25/64	9,92	35,32	60,72	86,12	111,52	136,92	162,32	187,72	213,12	238,52	263,92	289,32	314,72	340,12	365,52	390,92
13/32	10,32	35,72	61,12	86,52	111,92	137,32	162,72	188,12	213,52	238,92	264,32	289,72	315,12	340,52	365,92	391,32
27/64	10,72	36,12	61,52	86,92	112,32	137,72	163,12	188,52	213,92	239,32	264,72	290,12	315,52	340,92	366,32	391,72
7/16	11,11	36,51	61,91	87,31	112,71	138,11	163,51	188,91	214,31	239,71	265,11	290,51	315,91	341,31	366,71	392,11
29/64	11,51	36,91	62,31	87,71	113,11	138,51	163,91	189,31	214,71	240,11	265,51	290,91	316,31	341,71	367,11	392,51
15/32	11,91	37,31	62,71	88,11	113,51	138,91	164,31	189,71	215,11	240,51	265,91	291,31	316,71	342,11	367,51	392,91
31/64	12,30	37,70	63,10	88,50	113,90	139,30	164,70	190,10	215,50	240,90	266,30	291,70	317,10	342,50	367,90	393,30
1/2	12,70	38,10	63,50	88,90	114,30	139,70	165,10	190,50	215,90	241,30	266,70	292,10	317,50	342,90	368,30	393,70
33/64	13,10	38,50	63,90	89,30	114,70	140,10	165,50	190,90	216,30	241,70	267,10	292,50	317,90	343,30	368,70	394,10
17/32	13,49	38,89	64,29	89,69	115,09	140,49	165,89	191,29	216,69	242,09	267,49	292,89	318,29	343,69	369,09	394,49
35/64	13,89	39,29	64,69	90,09	115,49	140,89	166,29	191,69	217,09	242,49	267,89	293,29	318,69	344,09	369,49	394,89
9/16	14,29	39,69	65,09	90,49	115,89	141,29	166,69	192,09	217,49	242,89	268,29	293,69	319,09	344,49	369,89	395,29
37/64	14,68	40,08	65,48	90,88	116,28	141,68	167,08	192,48	217,88	243,28	268,68	294,08	319,48	344,88	370,28	395,68
19/32	15,08	40,48	65,88	91,28	116,68	142,08	167,48	192,88	218,28	243,68	269,08	294,48	319,88	345,28	370,68	396,08
39/64	15,48	40,88	66,28	91,68	117,08	142,48	167,88	193,28	218,68	244,08	269,48	294,88	320,28	345,68	371,08	396,48
5/8	15,88	41,28	66,68	92,08	117,48	142,88	168,28	193,68	219,08	244,48	269,88	295,28	320,68	346,08	371,48	396,88
41/64	16,27	41,67	67,07	92,47	117,87	143,27	168,67	194,07	219,47	244,87	270,27	295,67	321,07	346,47	371,87	397,27
21/32	16,67	42,07	67,47	92,87	118,27	143,67	169,07	194,47	219,87	245,27	270,67	296,07	321,47	346,87	372,27	397,67
43/64	17,07	42,47	67,87	93,27	118,67	144,07	169,47	194,87	220,27	245,67	271,07	296,47	321,87	347,27	372,67	398,07
11/16	17,46	42,86	68,26	93,66	119,06	144,46	169,86	195,26	220,66	246,06	271,46	296,86	322,26	347,66	373,06	398,46
45/64	17,86	43,26	68,66	94,06	119,46	144,86	170,26	195,66	221,06	246,46	271,86	297,26	322,66	348,06	373,46	398,86
23/32	18,26	43,66	69,06	94,46	119,86	145,26	170,66	196,06	221,46	246,86	272,26	297,66	323,06	348,46	373,86	399,26
47/64	18,65	44,05	69,45	94,85	120,25	145,65	171,03	196,45	221,85	247,25	272,65	298,05	323,45	348,85	374,25	399,65
3/4	19,05	44,45	69,85	95,25	120,65	146,05	171,45	196,85	222,25	247,65	273,05	298,45	323,85	349,25	374,65	400,05
49/64	19,45	44,85	70,25	95,65	121,05	146,45	171,85	197,25	222,65	248,05	273,45	298,85	324,25	349,65	375,05	400,45
25/32	19,84	45,24	70,64	96,04	121,44	146,85	172,24	197,64	223,04	248,44	273,84	299,24	324,64	350,04	375,44	400,84
51/64	20,24	45,64	71,04	96,44	121,84	147,24	172,64	198,04	223,44	248,84	274,24	299,64	325,04	350,44	375,84	401,24
13/16	20,64	46,04	71,44	96,84	122,24	147,64	173,04	198,44	223,84	249,24	274,64	300,04	325,44	350,84	376,24	401,64
53/64	21,03	46,43	71,83	97,23	122,63	148,03	173,43	198,83	224,23	249,64	275,04	300,44	325,84	351,24	376,64	402,04
27/32	21,43	46,83	72,23	97,63	123,03	148,43	173,83	199,23	224,63	250,03	275,43	300,83	326,23	351,63	377,03	402,43
55/64	21,83	47,23	72,63	98,03	123,43	148,83	174,23	199,63	225,03	250,43	275,83	301,23	326,63	352,03	377,43	402,83
7/8	22,23	47,63	73,03	98,43	123,83	149,23	174,63	200,03	225,43	250,83	276,23	301,63	327,03	352,43	377,83	403,23
57/64	22,62	48,02	73,42	98,82	124,22	149,62	175,02	200,42	225,82	251,22	276,62	302,02	327,42	352,82	378,22	403,62
29/32	23,02	48,42	73,82	99,22	124,62	150,02	175,42	200,82	226,22	251,62	277,02	302,42	327,82	353,22	378,62	404,02
59/64	23,42	48,82	74,22	99,62	125,02	150,42	175,82	201,22	226,62	252,02	277,42	302,82	328,22	353,62	379,02	404,42
15/16	23,81	49,21	74,61	100,01	125,41	150,81	176,21	201,61	227,01	252,41	277,81	303,21	328,61	354,01	379,41	404,81
61/64	24,21	49,61	75,01	100,41	125,81	151,21	176,61	202,01	227,41	252,81	278,21	303,61	329,01	354,41	379,81	405,21
31/32	24,61	50,01	75,41	100,81	126,21	151,61	177,01	202,41	227,81	253,21	278,61	304,01	329,41	354,81	380,21	405,61
63/64	25,00	50,40	75,80	101,20	126,60	152,00	177,40	202,80	228,20	253,60	279,00	304,40	329,80	355,20	380,60	406,00

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