BOOK No.

www.DaltonsWadkin.com

Modifications are made to these books from time to time and it is important therefore that only the book sent with the machine should be used as a working manual

PLEASE INSERT SERIAL NUMBER OF MACHINE

INSTRUCTION MANUAL FOR

350&400BRA

Universal & Semi Universal Radial Arm Saws



SAFETY OF WOODWORKING MACHINES

Woodworking machines can be dangerous if improperly used. The wide range of work of which they are capable, requires adequate safeguarding arrangements against possible hazards.

Many injuries to machinists are caused by carelessness or failure to use the guards provided or to adjust them correctly.

WADKIN PLC, supply machinery designed for maximum safety which they believe, as a result of thorough testing, minimizes the risks inevitable in their use. It is the user's responsibility to see that the following rules are complied with to ensure safety at work:

- The operation of the machine should conform to the requirements of the Woodworking Machines Regulations 1974. All guards should be used and adjusted correctly.
- 2. Safe methods of working only should be adopted as given in the Health and Safety Work Booklet No.41, "Safety in the Use of Woodworking Machines", (obtainable from Her Majesty's Stationery Office) and as advised by Wadkin Ltd.
- 3. Only personnel trained in the safe use of a machine should operate it.
- 4. Before making adjustments or clearing chips, etc., the machine should be stopped and all movement should have ceased.
- 5. All tools and cutters must be securely fixed and the speed selected must be appropriate for the tooling.

SAFETY IS OUR WATCHWORD BUT THE USER MUST COMPLY WITH THE ABOVE RULES IN HIS OWN INTEREST. WE WOULD BE PLEASED TO ADVISE ON THE SAFE USE OF OUR PRODUCTS.

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www.DaltonsWadkin.com

350 & 400 BRA Universal & Semi Universal Radial Arm Saws

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NOTE: MACHINE SHOWN ABOVE IS FITTED WITH LONG ARM (EXTRA)

SPECIFICATION. UNIVERSAL 350 BRA.

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Maximum diameter of saw. Maximum saw projection. Width will crosscut with. Standard arm at 90° Width will crosscut with. Standard at 45°.	350mm 108mm 415 x 108mm 480 x 25mm 227 x 108mm 288 x 25mm	$\begin{array}{c} 350 \text{mm} \\ 4\frac{1}{4} \text{''} \\ 16\frac{1}{4} \text{''} \times 4\frac{1}{4} \text{''} \\ 18\frac{3}{4} \text{''} \times 1 \text{''} \\ 8\frac{3}{4} \text{''} \times 4\frac{1}{4} \text{''} \\ 11\frac{1}{4} \text{''} \times 1 \text{''} \end{array}$
To order, machine can be fitted wi 265mm (10. 3/8") length of cut.	th longer arm to gi	ve additional
Maximum width of grooving head. Maximum ripping capacity. Height of work table. Diameter of saw spindle Power of motor.	50.8mm 680mm 805mm 30mm 3Kw. (4.5Kw optional)	2" 26¾" 31½" 30mm 4HP. (6HP optional)
Speed of motor, 50 hertz. Speed of motor, 60 hertz. Maximum overall height. Floor space. Net weight (Approx.) Gross weight (Approx.) Shipping dimensions (Approx.)	3000rev/mi 3600rev/mi 1790mn 1170 x 1600mm 210Kg. 316Kg. 0.99 cu.m.	n. .n. 46 x 63" 462 lb. 695 lb. 35 cu.ft.
	Nac	
SPECIFICATION. SEMI UNIVERSAL 350	BRA.	
Maximum diameter of saw. Maximum saw projection. Width will crosscut with Standard arm at 90 Width will crosscut with. Standard arm at 45	350mm 108mm 440 x 108mm 490 x 25mm 244 x 108mm 309 x 25mm	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
To order, machine can be fitted wi 265mm (10. 3/8') length of cut.	th longer arm to gi	ve additional
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Speed of motor, 50 hertz. Speed of motor, 60 hertz. Maximum overall height. Floor space. Net weight (Approx.) Gross weight (Approx.) Shipping dimensions. (Approx.)	(4.5Kw optional) 3000rev/mi 3600rev/mi 1790mm 1170 x 1600mm 210Kg. 316Kg. 0.99 cu.m.	(6HP optional) in. 70½" 46 x 63" 462 lb. 695 lb. 35 cu.ft.

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SPECIFICATION. UNIVERSAL 400 BRA.

Maximum diameter of saw.			400mm	400mm
Maximum saw projection.			133mm	5.1/8"
Width will crosscut with.	390	x	133mm	$15\frac{1}{4} \times 5.1/8''$
Standard arm at 90°.	450	х	25mm	17.5/8" x 1"
Width will crosscut with.	· 110	х	133mm	4¼ x 5.1/8"
Standard arm at 45° .	· 260	х	25 mm	10¼ x 1"

To order, machine can be fitted with longer arm to give additional 265mm (10.3/8") length of cut.

50.8mm	2"
760mm	29¾''
805mm	31 <u>‡</u> "
30mm	30mm
4.5Kw.	6HP.
3000rev/min	
3600rev/min.	- -
1790mm	70불''
1170 x 1650mm 🔰 46	x 63"
240Kg	528 lb.
346Kg.	761 lb.
0 .99 cu.m.	35 cu.ft.
	50.8mm 760mm 805mm 30mm 4.5Kw. 3000rev/min 3600rev/min 1790mm 1170 x 1650mm 46 240Kg 346Kg. 0.99 cu.m.

SEMI UNIVERSAL 400 BR SPECIFICATION.

	· ·			
Maximum diameter of saw.		400mm		400mm
Maximum saw projection.		133mm		5.1/8"
Width will crosscut with.	415 x	133mm	$16\frac{1}{4}$	x 5.1/8"
Standard arm at 90°.	465 x	25mm	$18\frac{1}{4}$	x l''
Width will crosscut with.	130 x	133mm	5	x 5.1/8"
Standard arm at 45°.	280 x	25mm	11	x l"
To order machine can be fitted with	th longer	r arm to give	പെട്ടും	itional

To order, machine can be fitted with longer arm to give additional 265mm (10.3/8") length of cut.

 $2^{\prime\prime}$ Maximum width of grooving head. 50.8mm 31 %" Height of work table. 805mm 30mm Diameter of saw spindle. 30mm 4.5Kw. 6HP. Power of motor. Speed of motor, 50 hertz. 3000rev/min. Speed of motor, 60 hertz. 3600rev/min. Maximum overall height. 70<u>1</u>" 1790mm x 63" Floor space. 1170 x 1600mm 46 528 lb. Net weight (Approx.) 240Kg. 761 lb. Gross weight (Approx.) 346Kg. Shipping dimensions (Approx.) 0.99 cu.m. 35 cu.ft.

SPECIFICATION. UNIVERSAL 350 BRA.

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Maximum diameter of saw. Maximum saw projection. Width will crosscut with. Standard arm at 90° Width will crosscut with. Standard at 45°.	350mm 108mm 415 x 108mm 480 x 25mm 227 x 108mm 288 x 25mm	$\begin{array}{c} 350 \text{mm} \\ 4\frac{1}{4} \\ 16\frac{1}{4} \\ x 4\frac{1}{4} \\ 18\frac{3}{4} \\ x 1 \\ 8\frac{3}{4} \\ x 4\frac{1}{4} \\ 11\frac{1}{4} \\ x 1 \\ \end{array}$
To order, machine can be fitted wi 265mm (10. 3/8") length of cut.	ith longer arm to g	give additional
Maximum width of grooving head. Maximum ripping capacity. Height of work table. Diameter of saw spindle Power of motor. Speed of motor, 50 hertz. Speed of motor, 60 hertz. Maximum overall height. Floor space. Net weight (Approx.) Gross weight (Approx.) Shipping dimensions (Approx.)	50.8mm 680mm 805mm 30mm 3Kw. (4.5Kw optional) 3000rev/n 3600rev/n 1790mn 1170 x 1600mn 210Kg. 316Kg. 0.99 cu.m	2" $26\frac{3}{4}$ " $31\frac{1}{2}$ " 30mm 4HP. (6HP optional) nin. nin. $70\frac{1}{2}$ " 46×63 " 462 lb. 695 lb. n. 35 cu.ft.
SPECIFICATION. SEMI UNIVERSAL 85	BRA.	
Maximum diameter of saw. Maximum saw projection. Width will crosscut with Standard arm at 90°. Width will crosscut with. Standard arm at 45	350mm 108mm 440 x 108mm 490 x 25mm 244 x 108mm 309 x 25mm	$\begin{array}{c} 350 \text{mm} \\ 4\frac{1}{4} \text{''} \\ 17\frac{1}{4} \times 4\frac{1}{4} \text{''} \\ 19\frac{1}{4} \times 1 \text{''} \\ 9\frac{1}{8} \times 4\frac{1}{4} \text{''} \\ 12 \times 1 \text{''} \end{array}$
To order, machine can be fitted with 265 mm (10. $3/8$ ') length of cut.	ith longer arm to g	give additional
Maximum width of grooving head. Height of work table. Diameter of saw spindle. Power of motor.	50.8mm 805mm 30mm 3Kw	2'' 31½'' 30mm 4HP
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Maximum saw projection.		133mm	5.1/8"
Width will crosscut with.	390 x	133mm	15¼ x 5.1/8"
Standard arm at 90°.	450 x	25mm	17.5/8" x 1"
Width will crosscut with.	110 x	133mm	44 x 5.1/8"
Standard arm at 45°.	260 x	25 mm	$10\frac{1}{4} \times 1''$

To order, machine can be fitted with longer arm to give additional 265mm (10.3/8") length of cut.

Maximum width of grooving.	50.8mm	2''
Maximum ripping capacity.	760mm	29¾"
Height of work table.	805mm	31 <u>‡</u> "
Diameter of saw spindle.	30mm	30mm
Power of motor.	4.5Kw.	$6 \mathrm{HP}$.
Speed of motor, 50 hertz.	3000rev/min	
Speed of motor, 60 hertz.	3600rev/min.	
Maximum overall height.	1790mm	70½''
Floor space.	1170 x 1650mm 🕥 46	x 63"
Net weight (Approx.)	240Kg	528 lb.
Gross weight (Approx.)	346Kg.	761 lb.
Shipping dimensions (Approx.)	0.99 cu.m.	35 cu.ft
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SPECIFICATION. SEMI UNIVERSAL 400 BR

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Maximum diameter of saw.		400mm		400mm
Maximum saw projection.		133mm		5.1/8"
Width will crosscut with.	415 x	133mm	16韋	x 5.1/8"
Standard arm at 90°.	465 x	25mm	18‡	x 1"
Width will crosscut with.	130 x	133mm	5	x 5.1/8"
Standard arm at 45°.	280 x	25mm	11	x 1"

To order, machine can be fitted with longer arm to give additional 265 mm (10.3/8") length of cut.

Maximum width of grooving head. Height of work table. Diameter of saw spindle. Power of motor. Speed of motor, 50 hertz. Speed of motor, 60 hertz. Maximum overall height. Floor space. Net weight (Approx.) Gross weight (Approx.) Shipping dimensions (Approx.)

	50.8mm	2"
	805mm	311''
	30mm	30mm
	4.5Kw.	6HP.
	3000rev/min.	
	3600rev/min.	
	1790mm	70 <u>1</u> ''
х	1600mm 46	x 63"
	240Kg.	528 lb.
	346Kg.	761 lb.
	0.99 cu.m.	35 cu.ft.

APPROVED LUBRICANTS

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Application		I	Approved L	ubricant		
	Castrol	B. P.	Shell	Esso	Texaco/ Caltex	Wadkin
Worm Boxes	Alpha 617	EnergolCS425	Vitrea 75	Pen-O-Led E. P.3	Regal Oil J	L.2.
General Lubrication	Magna ED	Energol HP.20	Vitrea 33	Esstic 50	Ursa Oil P. 20	L.4.
Pneumatic Lubricators	Hyspin AWS 32	Energol HL 65	Tellus 27	Nuto H 44	Rando Oil HDA	
Grease	Spheerol AP.3	Energrease LS.3	Alvania 3	Beacon 3 Starfak Premium 3	Regal	L.6.
Brake Cables	Brake cable grease	Energrease L21M	Alvania 3	Multi-purpose grease H		

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INSTALLATION

Remove protective coating from bright parts by applying a cloth soaked in paraffin, turpentine or some other solvent.

When the machine is cased for export the carriage and motor unit are removed from the arm, the arm is removed from the pillar, the pillar and foot assembly is removed from the base along with the legs. All these items are packed individually in the case. Remove and assemble as shown in Fig. 1.



WIRING DETAILS

I PHASE

The motor and control gear have been wired in before despatch. All that is required is to connect the power supply to the starter.

DIAGRAM

FIG. 3,

WIRING

- Points to note when connecting to power supply :-I. Check the voltage, phase and frequency correspond to those on the motor plate, also the correct coils and heaters are fitted to the starter.
- It is important that the correct cable is used to give the 2, correct voltage to the starter, as running on low voltage will damage the motor.
- Check the main line fuses are of the correct capacity. 3. See list below.
- Connect the line leads to the appropriate terminals. See Fig 4. 2 for 3 phase supply and Fig. 3 for 1 phase supply.
- 5. Check all connections are sound.
- Check the rotation of the motor for correct direction. If 6. this is incorrect for 3 phase supply reverse any two of the line lead connections,



LUBRICATION

It is advisable to keep all bright parts covered with a thin

film of oil to prevent rusting. The slide rods and rollers should also be kept clear of any sawdust and chippings for ease of operation.

TYPE OF OIL RECOMMENDED POWER EM, 125 TYPE OF GREASE RECOMMENDED SHELL ALVANIA 3.



FOUNDATION See Fig. 5 for bolt positions and clearance required. See Fig. 5 for bolt positions and clearance required, When installing, the machine must be levelled up by means of packing pieces under the feet. The machine table should be slightly high at the front end. This will ensure that the saw unit remains in the back position when not in use. This does not affect the accuracy of the machine. Foundation bolts are not supplied with the machine except special order.



All adjustment and alignments listed below have been carefully set and checked and the whole machine thoroughly tested before despatch from the works. Should any adjustment be necessary proceed in

accordance with the relative instructions given,



LEVELLING TABLE

To check the table for alignment to the arm the undermentioned procedure should be followed :-

- Remove the sawguard and blade from the motor. Τ. 2. Ensure the motor locating latch "A" in Fig, 9,
- the stirrup locating latch "B" and the carriage locking screw "C" in Fig. 16 is securely locked.
- Secure a small dia. rod between saw flanges as shown 3. in Fig. 6 then raise or lower arm until end of the rod almost touches table.
- Lift arm locating latch "C" in Fig. 9 and swing arm to extreme ends of the table checking that clearance between rod and table remains constant,
- 5. Should the table need adjustment remove table packing pieces and fence, adjust table supports by loosening hexagon head bolts and moving up or down whichever is required. When set tighten all bolts,
- 6. Replace fence in position required and replace packing pieces and wedges,

SAW ALIGNMENTS

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1, Saw square to table

To check this alignment, place a steel square against the saw as shown in Fig. 7. If adjustment is necessary, disengage the motor locating latch "A", loosen motor pivot locking handle "B" and adjust sawblade until square. Lock in this position with lever "B", then adjust aerotight hexagon nuts "C" and hexagon locknuts "D" until latch "A" locates accurately in the motor locating ring.

Line of travel to fence 2.

To check this alignment place a pencil between the saw flanges, as shown in Fig. 8 and scribe a line on the table. Check this is at 90° to the fence by means of a steel square. If adjustment is necessary, loosen arm locking lever "A" in Fig. 8, and disengage the pillar locating latch "B", adjust arm until square, lock in position ; then adjust aerotight hexagon nuts "C" and hexagon locknuts "D" until the latch "B" locates accurately in the pillar.



3. Sawblade in relation to fence.

3. Sawblade in relation to fence. To check this alignment place a steel rule or some other similar straight edge between the saw flanges as shown in Fig. 9 and a steel square against the fence. Rotate the steel rule from front to rear. If adjustment is necessary loosen stirrup locking handle "D", and disengage the stirrup locating latch "B", set correctly, then relock in position with lever "D". Adjust the aerotight nuts "E" and hexagon locknuts "F" until the latch "B" locates accurately in the slot in the stirrup. latch "B" locates accurately in the slot in the stirrup.







RIVING KNIFE ALIGNMENT

<u>RIVING KNIFE ALLCOMENT</u> The riving knife should be central between the set of the saw. Should the riving knife be incorrectly positioned loosen the two socket head cap screws "A" in Fig. 10. Place a steel rule or some other straight edge along the riving knife and set central to saw. With the riving knife in this position re-tighten the two socket head cap screws "A". To check this sotting food a short pipes of timber

To check this setting feed a short piece of timber from the rear, along both sides of the riving knife. If the riving knife is correctly set the blade should cut an equal shoulder as shown in Fig. 11 (a) not an unequal shoulder as shown in Fig. 11 (b)



COLUMN ADJUSTMENTS

Movement in the arm may be traced to the pillar. To take up any play which may develop adjust the special socket head cap screw "A" in Fig. 12. A adjustment the pillar rise and fall should be checked to ensure the movement is not too tight. After

SAW_GUARD

SAW GUARD The guard gives maximum protection for all operations. The guard is fitted with an anti-kick back device as shown in Fig. 13 and riving knife for ripping. The riving knife is easily detachable and can be replaced by a sheet steel visor when used for crosscutting. The visor is adjustable throughout the full depth of cut of the machine. An adjustable rubber dust exhaust is fitted to the guard to direct the sawdust away from the operator.



- <u>HOW TO ADJUST KICK BACK FINGERS</u> The anti-kick back fingers are fitted to the saw guard and they are adjustable throughout the full depth of cut of the machine. <u>To set kick back fingers correctly</u>:Place timber to be ripped in kick back fingers as shown in Fig. 13.
 Loosen handwheel "A" then lower the fingers until they come in contact with the timber. Fress bracket a further ½" (3mm) hold in that position, re-lock handwheel "A".
 To remove timber press the point of kick back fingers at "B" towards the table and withdraw the timber. timber.
- The timber can now be ripped without any danger of it being kicked back at the operator.



in Fig. 14. The handle turns a screw in a brass nut which is anchored to the foot. The total travel of the arm is 14" (356mm)

SWIVEL OF THE ARM The arm swings 45° each way to the fence with the principle angles located by a tapered latch "B" in Fig. 14. The angles to the fence line are indicated by a pointer on the arm bearing cap at "C". A powerful lock is provided and can be applied by lever "D".



CARRIAGE AND MOTOR UNLT The carriage is mounted on four sealed for life ball bearing rollers grooved to coincide with the circular slideways on the arm. The carriage can be locked in any position along the arm by means of the handwheel on the right of the carriage. The stirrup is fastened to the carriage by a central pin which enables the motor to swivel through 360°. The principle angles are located by a tapered latch "A" in Fig. 15. The stirrup can be locked at any angle by the lever "B".



The motor swivels within the stirrup through 90° . The principle angles are located by a tapered latch "A" in Fig. 16. The angle of cant is clearly shown on a graduated scale by the pointer "B".

The motor can be locked at any angle by the locking lever "C". CAUTION

SUPPORT MOTOR BEFORE RELEASING LOCKING LEVER 'C' & PLUNGER 'A'.



WOOD TABLE

The wood table is made in such a way to give four fence positions. The fence can easily be moved from one position to another by knocking out the wedges and placing the table strips to suit whichever fence position is required.

POSITION 1.

This enables a maximum timber size of 14" wide x $4\frac{1}{2}$ " deep (356mm x 114mm) to be crosscut with the arm at 90°.

POSITION 2.

This enables a maximum timber size of 17" wide x 1" deep (432mm x 25mm) to crosscut with the arm at 90° .

POSITION 3.

This is the most convenient fence position when cutting compound angles with the arm swung to the left of the operator.

There is a rule fitted to each side of the arm for use when ripping. The fence positions, so that these rules show the correct sizes, are as follows :-

When ripping from the right hand side of the machine the rule as shown in Fig. 21. 1. nearest the operator will read correctly with the fence in position 4.

When ripping from the left hand side of the machine the 2. rules nearest the operator will read correctly with the fence in position 1.

FITTING SAWBLADES

To fit sawblades the undermentioned procedure should be followed :-

- T. Remove the sawguard complete from the motor.
- 2. Fit long arm hexagon wrench into spindle end and remove the spindle locknut, left hand thread, and remove front saw flange.
- 3. Fit saw to spindle taking care to ensure the teeth are pointing in the correct direction, also the saw flanges and saw are clean and free from any dirt or sawdust. 4
- Replace saw spindle nut and sawguard,



HOW TO FIT DADO

A dado head is made up of two outside saws and 5 inner cutters. Various combinations of saw and cutters are used to cut grooves from 1/8" to 1" wide (3mm to 25mm), Inner cutters are heavily swaged and must be arranged so that the heavy portion falls in the gullets of the outside saw as shown on 19 (1), Fig. 19 (b) shows how the saws and cutters overlap "A" being the saw and "B" being the inside cutter. A $\frac{1}{4}$ " (6mm) groove is cut by using the two outside saws fitting the ground teeth directly opposite as shown in Fig. 19 (c) in order to allow clearance for the slight set of the saw teeth.

The dado is secured on the spindle between the standard saw flanges as shown in Fig. 18. To fit dado head remove the sawguard and front saw flange, also remove the driving peg from the rear saw flange. Fit the outer saws and required inner cutters onto the spindle and lock in position, then replace sawguard,

HOW TO FIT MOULDING CUTTERBLOCKS

The cutterblocks are mounted on the end of the spindle

To mount cutterblocks remove the sawguard and saw flanges Fit the 1.1/8'' (28.5 mm) long distance piece supplied onto the spindle then the cutterblock. The special locknut and spanner, type QT.37, should be used to lock the block in position. The special guard can be supplied for use with these blocks, www.DaltonsWadkin.com



SAW MAINTENANCE

Efficient operation of a circular saw depends on true running of the saw spindle and the collars being perfectly square on the faces with the axis of the spindle, it must run at the correct peripheral speed to ensure straight cutting. The Bursgreen radial arm saw embodies all these requirements and provided the saw is maintained in a sharp condition with the teeth correctly sharpened and set, efficient service will be given.

Before putting a new saw to use, it is essential that it is "ranged down" on the teeth to ensure each tooth is cutting and to maintain true running.

RANGING

Ranging down should be done on a new saw or any saw after the 4th or 5th re-sharpening.

Feed a square edged abrasive block, in wooden holder, lightly against the saw teeth whilst running. The saw should then be removed and the tops of the teeth filed to remove the ranging marks on the points,





HOW TO FIT SANDING BOBBINS

The sanding bobbins consist of *i*our rubber sections each $\frac{1}{2}$ " (12.5mm) thick mounted on a sleeve flange at each end.

Before mounting the bobbins onto the spindle, the sawguard and saw flanges should be removed and the bobbins fit onto spindle as shown in Fig. 22 and locked onto the spindle with the standard arbor nut, left hand thread.





SAW SHARPENING

Do not run a saw when blunt, remove and re-sharpen. Hold a saw rigid in a vice as shown in Fig. 23 or a simple saw vice as shown in Fig. 24 which can be readily made and proceed to sharpen saw.

With rip saw teeth, chisel edges and square faces are needed see Fig. 25. Sharpen by giving each tooth an equal number of strokes with a flat faced saw file with rounded edges. At the same time file the gullet, taking care to keep the gullet well rounded.

With a crosscut saw, saw points are needed with back and front bevels, as shown in Fig. 26. In the course of repeated filing the teeth loose the original

In the course of repeated filing the teeth loose the original shape and the gullets shallow. To restore the shape of each tooth, essential for satisfactory performance, it is necessary to grind the saw on a saw sharpening machine. These machines are usually of the automatic type and feeds each tooth, giving equal spacing or pitch.



SETTING

The amount of set to the teeth should be sufficient to give clearance to the body of the saw so that there is freedom from friction between saw and timber. It is generally accepted that the teeth are "spring set" i.e. the tips of alternative teeth are bent to the right and left as shown in Fig. 27. For good sawing the amount of set on each side of the saw must be identical otherwise the saw will run to one side. To check the set, cut into a piece of wood of few inches when a small even triangle should be seen, Fig. 28.

The exact amount of set each side varies with the timber being cut, usually .010" to .015" (.03mm to .04mm)

For clean cutting, just sufficient set should be allowed to This prevent bending and heating. More set is required for wet, thick woolly timber than for dry, close grained timber and the amount of set is greater for corsscutting saws than those for ripping, vice www.DaltonsWadkin.com





MACHINE SETTING

We can supply a small machine for efficiently setting the teeth as illustrated in Fig. 29 and will deal with saws 8" to 36" (202mm to 910 mm) diameter. The micrometer dial indicates accurate reading of the amount of set in thousandths of an inch.



HAND SETTING

Where the number of saws does not warrant a machine being installed the saws are set by hand using a tool shown in Fig. 30. This tool is provided with six notches to take saws 8 to 14 guage thick.

For this process of setting, the saw is securely clamped in a vice.



DILLAR ASSEMBLY

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Def. Jo.	Part No.	No. Off	Description
L.	BRA 135	1	Pillar
U	BRA 14	1	Rise & Fall screw
3	BRA 134	1	Foot
ſ ⁴	BRA 46	1	Rise & Fall nut locking screw
15	BRA 13	1	Rise & Fall nut
6		1	M16 Aerotight nut
2		1	M6 Dia x 25 Long socket head grubscrew
3		1	M16 x 125 Long hexagon head bolt
0	BRA 47		Rise & Fall nut adjusting screw
		Ţ	MIZ X 50 Long nexagon head bolt
	1000/00	4	Wiz x 60 Long nexagon nead boit
	1026/22	4.	Washer for foot
10		1	No. 4 Plack plactic handle
	884 33	1	Rice & Fall handle
	$\Delta_{-}S_{-}945$	⊥ 1	Spindle for rise & fall handle
17	A-0-240	1	5mm Dia x 40 Long groverlock spring
ſ,		Т	dowel
618		3	M8 x 35 Long socket head capscrew
19	BRA 51	1	Rise & Fall handwheel bearing
r20	SKF51202	1	Thrust race
21	BRA 70	1	Rise & Fall screw collar
22		2	6mm Dia x 44 Long fluted dowel
_23	BRA 94	1	Pointer VO
24	No. 2	1	1/4 Long hammer drive rivot
L_{25}	45127152	1	M10 Tap x 1 1/4" Dia black plastic ball
_26	BRA 236	1	Arm locking handle c/w M10 x 25 long
		-	socket head grubscrew
L27	BRA 234	1	Arn locking bolt
28	BRA 20	1	Arm locating latch
		$\frac{2}{2}$	M12 LOCKNUT
	DDA 995		MIZ Aerotight nut
່ <u>31</u> ວດ	BRA 230		Arm locking nanute nut
	BBA /1		Divot nin for locating lateh
634	DIVU 4T	3	Min x 10 Long socket head grubscrew
35	BBA 48	4	Locating bolt
П		4	TOOMATE POID

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Machine Parts List

IMPORTANT.

WHEN ORDERING REPLACEMENT PARTS, PLEASE QUOTE PART NUMBER AND SERIAL NUMBER OF MACHINE.

For Replacement Parts, Tools & Accessories, Contact Spares Dept., Ext. 45, Bursgreen (Durham), Fence Houses, Houghton~le~Spring, Tyne~Wear DH4 5RQ, England. Telephone: Fence Houses 852385 (5 lines) Telex: 53441 (Bursgreen Duram)



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ARM A	SSEMBLY		
Ref. No.	Part No.	No. Off	Description
45 46 47	BRA 23	1 2 8	Arm end cap M10 x 30 long socket head capscrew M5 x 10 long button head socket screw
48	BRA 28 BRA 29 BRA 30	1 1 1	Left hand arm plate - 430 arm Right hand arm plate - 430 arm Left hand arm plate - 700 arm
49 50	BRA 31	1 1 8 10	Right hand arm plate - 700 arm Rubber stop for end cap M4 hexagon head nut - 430 arm M4 hexagon head nut - 700 arm
51		8 10	M4 x 25 long socket head capscrew-430arm M4 x 25 long socket head capscrew-700arm
52	BRA 49 BRA 50	2	Slide rod - 430 arm Slide rod - 700 arm
53 54 55	BRA 116 BRA 117 BRA 118 BRA 119 BRA 15 BRA 16	2 1 1 1 1 1	1/8" dia x 6mm long pop rivot Metric rule for 430 arm Metric rule for 700 arm Imperial rule for 430 arm Imperial rule for 700 arm 430 Capacity arm
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BASE AND TABLE ASS

Ref. No.	Part No.	No. Off	Description
60	BRA 71 BRA 72	1 1	Outer support bracket - Left hand Outer support bracket - Right hand
61 62		18 12 6	M10 x 25 Long hexagon head bolt M10 Hexagon head nut M10 Hank bush
63	BRA 53	1	Base
64	BRA 64	1	Central support bracket (420 amm
01	BRA 73	1	Central support bracket = 450 arm
65	BRA 3	4	Leg for base
66	BRA 108	1	Table -430 arm
00	BRA 92	1	Table -700 arm
67	01001 02	1	52mm Wide fence
68		1	63mm Wide table strip - 350 & 400
••		-	universal head
		1	80mm Wide table strip - 350 & 400
		<i>— ·</i>	crosscut head
69		1	37mm Wide table strip - 350 & 400
			universal head
		1	63mm Wide table strip - 350 & 400
			crosscut head
		1	58mm Wide table strip - 350 universal
			head
70		1	25mm Wide table strip - 350 & 400
			universal head
		1	37mm Wide table strip - 350 & 400
	554 66		crosscut head
71	BRA 96	1	Right hand back support
72	BRA 97	2	Table wedge
73	BRA 104	2	Back support packing piece
74	BRA 95	1	LeIt hand back support
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SEMI-UNIVERSAL HEAD ASSEMBLY

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Ref. No.	Part No.	No. Off	Description
No. 80 81 82 83 84 85 86 87 88 88 89	Part No. BRA 89 FAFNIR SD 5649 BRA 79 BRA 69 BRA 67 BRA 57 BRA 57 BRA 24	Off 3 4 4 1 1 2 2 2 2 2 2 2	Description Eccentric roller pin Convex roller bearing Washer for bearing Rubber stop Back stop M8 Wingnut M8 x 30 Long stud Sawguard locking shoe M8 x 10 Long button head socket screw Saw flanges (30mm Bore.)
$ \begin{bmatrix} 90\\ 91\\ 92\\ 93\\ 94\\ 95\\ 96\\ 97\\ 98\\ 99\\ 100 \end{bmatrix} $	BRA 44 BRA 91 BRA 10 BRA 56 BRA 220 BRA 220	1 4 4 1 1 2 2 8 2 1	Saw spindle nut (30mm Fine thread.) Plain roller pin 10mm Washer 10mm Nut Motor packing and roller bracket Motor (Refer to motor plate for required motor.) M8 x 25 Long socket head capscrew M5 x 20 Long button head socket screw Motor plate looking shoe M8 x 25 Long button head socket screw Pull handle bracket
$ \begin{bmatrix} 101 \\ 102 \\ 103 \end{bmatrix} $ $ \begin{bmatrix} 104 \\ 105 \\ 106 \\ 107 \end{bmatrix} $	BRA 221 PATT.NO.952 BRA 89 BRA 91 FAFNIR SD 5649 BRA 79	1 1 3 1 4 4 4 4 4 4	Pull handle shaft Black plastic handle Eccentric roller pin Plain roller pin Convex roller bearing Washer for bearing 10mm Washer M10 Nut
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UNIVERSAL HEAD ASSEMBLY

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Lef. No.	Part No.	No. Off	Description
115 16	BRA 65	2 2	Plunger Handle M8 x 25 Long hexagon head bolt
117 A18	BRA 19	4 1	Stirrun location nlunger bracket
19	ETS 90	1	Spring
$4\tilde{20}$	BRA 68	1	Location plunger
121	KOS-27.303.	2	M8 Wingnut
1.22	KOS.26.234	2	M8 x 30 Long stud
$L_{23}$	BRA 57	2	Sawguard locking shoe
124		2	M8 x 10 Long button head socket screw
$\Gamma^{25}$		2	M6 x 12 Long socket head grubscrew
L126		1	Front mounting plate
127		4	M8 x 25 Long socket head capscrew
[].	BRA 56	6	Motor plate locking shoe
	BRA 22	1	Front stirrup location pad
120		1	M8 X 20 Long naxagon nead poit
130 N 31	BRA 76	1 2	Stud for motor plunger bracket
132	BRA 18	1	Motor location plunger bracket
133	2.00 20	$\frac{1}{2}$	M6 x 12 Long socket head capscrew
<b>n</b> 134		2	M8 Aerotight nut
135	BRA 68	1	Location plunger
<u> </u>	ETS 90	1	Spring
$c^{136}$	BRA 94	1	Pointer for motor pivot
137	No. 2	$\frac{1}{1}$	1/4 Long hammer drive rivot
438 -	KS12/175	1 9643/	Black P pull handle, M10 tap + 9
139 D40	BRA 04 BDA 02	1	Angle indicator casle
141		2	1/4 Long self tanning screw
142	2 0	3	M8 x 30 Long socket head capscrew
n143	BRA 55	1	Front stirrup location piece
144		1	M10 x 110 Long hexagon head bolt
145	BRA 77	1	Stirrup locking washer
146	BRA 111		Motor pivot locking handle
	BRA 107		Stirrup locking handle
140	1072-137	L L	Washer for stirrup locking lever
$\overline{D150}$	10/2 101		M5 x 12 Long socket head grubscrew
151	BRA 74	1	Stirrup phasing washer
152		1	M6 x 6 Long socket head grubscrew
$\Gamma^{153}$	BRA 61	1	Rear stirrup location piece
154	BRA 109	1	Motor pivot locknut
-155		1	1 3/4" Black plastic handwheel M10 tap
156	PDA 115	1	MIU X 60 Long Stud
158	BRA 110	1	Travel lock
159	BRA 66	1	Stirrup pivot pin
<b>[160</b>	BRA 67	1	Back stop
161	BRA 69	1	Rubber back stop
<u> </u>	BRA 1	1	Roller bracket
$\Gamma^{163}$	BRA 9	1	Stirrup
164	BRA 60	1	Rear stirrup locking washer
⁻¹⁶⁵	BRA 58	1	Motor pivot pin
100	DRA DY	T	rear mounting plate

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![](_page_24_Figure_1.jpeg)

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UNIVER	SAL HEAD ASSE	EMBLY(Contin	ued)
Ref. No.	Part No.	No. Off	Description
167 168		2 1	M8 x 35 Long socket head capscrew Motor (Refer to motor plate for required motor.)
$ \begin{bmatrix} 169 \\ 170 \\ 171 \end{bmatrix} $	BRA 44 BRA 24 BRA 85	1 2 2	Saw spindle nut (30mm Fine thread.) Saw flange (30mm Bore.) Eccentric roller pin
172	FG 3400 FAFNIR	4	Concave roller
0173 174 ∏175	BRA 78 BRA 84 BRA 85	4 2 2	Washer for bearing Plain roller pin Eccentric roller pin
U 176	BRA 84 SD 5649	2 4	Plain roller pin Convex roller
$\begin{bmatrix} 177\\177\end{bmatrix}$	FAFNIR BRA 79	4	Washer for bearing
$\begin{bmatrix} 178\\179\\\end{bmatrix}$		4 4	M10 Nut
			- Hill.
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![](_page_26_Figure_0.jpeg)

![](_page_27_Figure_0.jpeg)

![](_page_28_Figure_1.jpeg)

![](_page_29_Figure_1.jpeg)

SQUARE EDGE CUTTERS FOR ABOVE CUTTERBLOCKS, TYPE VZ 5/32" x 1½" long. Solid High Speed Steel. Width on 1" 1¼" 1¾" 2" 11/2" cut 3/2 Part No. vz VZ1 VZ2 VZ3 VZ4 VZ5 Tungsten Carbide Tipped Width on 1" 1%" 2" 1½" 1¾" cut Part

VZ2/T

1¼"

**VZ22** 

1¼" 1½" VZ22/T VZ23/T 1½"

Sold High Speed Steel in the bar: 5/32" thick, 34", 1", 114", 112", 134", 2", 214", 234", 3" wide.

High Speed Steel Welded to Mild Steel: 1/4" thick,

VZ3/T

11/2"

**VZ23** 

VZ4/T

1¾"

VZ24

VZ5/T

2"

**VZ25** 

No. VZ/T v4 %" thick x ½" long

**VZ20** 

Width on cut

Part No.

Tungsten Carbide Tipped

34", 1", 114", 11/2", 2" wide.

Width on

Part

No.

VZ1/T

High Speed Steel Welded to Mild Steel

1"

**VZ21** 

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Adjustable metal fence with stop bar for cutting off material up to 3'6'' (1067mm) long complete with two adjustable turn over stops for repetition work. Longer stop bars can be supplied to special order, to give capacities 6ft, 9ft and 12ft (1,828mm, 2,743mm and 3,658mm). Maximum graduation is 6ft. (1828mm) on any bar supplied.

![](_page_29_Picture_6.jpeg)

onto de la constance de la con Adjustable stop for multiple crosscutting designed to drop onto the stop bar shown above.

![](_page_29_Picture_8.jpeg)

Horse shoe fence for use when moulding, routing, etc.

![](_page_29_Picture_10.jpeg)

# SANDING BOBBINS

These bobbins consist of four circular rubber sections each "A thick mounted on a sleeve, with a steel flange at each end, and carrying spirally would aluminous oxide cloth belts, grade 0-80 or grade 1-50. Two sizes available, 2" diameter x 2" deep, 3" diameter x 2" deep.

![](_page_29_Picture_13.jpeg)

Shaw type guard for use with fences when moulding, etc. Metal roller table 77" (1955mm) long and 12" (305mm) wide complete with graduated stop bar can be supplied for use in either side of the machine. The illustration on page 16 shows a table fitted to the left of the machine. When ordering please state which side of the machine the table is to be fitted for purpose of the

3" diameter Capacity of table is 8ft. (2438mm) to the left of the saw and 9ft. (2740mm) to the right of the saw. www.DaltonsWadkin.com

# www.DaltonsWadkin.com

# APPLIC ATIONS

There is a place in every woodworking shop for this versatile machine. The saw unit rotates horizontally through  $360^{\circ}$  and fits to any angle from horizontal to vertical; it can be locked in any position along the arm which swings 45⁰ either way. Thus by simple, quick and positive movements the saw can be arranged to do crosscutting, bevel crosscutting, mitring, compound angle cutting, ripping and bevel ripping to a maximum of  $4\frac{1}{2}$ " (114 mm) cut, In addition by fitting dado or trenching heads, cutterblocks, moulding blocks etc. an almost unlimited variety of operations are possible - even disc and bobbin sanding can be done with this extremely versatile machine.

![](_page_30_Figure_3.jpeg)

MOULDING WITH CIRCULAR CUTTERBLOCK.

![](_page_30_Picture_5.jpeg)

PLOUGHING WITH DADO HEAD.

GROOVING WITH DADO HEAD. www.DaltonsWadkin.com

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![](_page_31_Picture_3.jpeg)

METAL ROLLER TABLE SHOWN FITTED TO THE LEFT OF THE SAW TO GIVE A MAXM OF 8FT (2,438MM). WHEN FITTED TO THE RIGHT IT GIVES A MAXM OF 9FT (2,743MM).

![](_page_31_Picture_5.jpeg)

CROSSCUTTING USING TURNOVER STOP & METAL FENCE FOR REPETITION WORK.

MULTIPLE CROSSCUTTING USING METAL FENCE AND SPECIAL STOP WHICH CAN BE READILY FITTED TO THE STOP BAR.

THE ILLUSTRATED JOINTS CAN BE READILY DONE ON THIS MACHINE, SOME MAY REQUIRE SIMPLE JIGS.

![](_page_32_Picture_2.jpeg)

TONGUE & GROOVE

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