

## VERTICAL BOBBIN SANDER, TYPE J. Y.

### PRINCIPAL DIMENSIONS AND CAPACITIES.

	English	Metric
Maximum depth of material sanded. . . . .	7"	180mm
Bobbin supplied with the machine . . . . .	3½" diameter	90mm diameter
Maximum diameter of bobbin . . . . .	5"	127mm
Minimum diameter of bobbin . . . . .	2"	50mm
Stroke of bobbin . . . . .	7/8"	22mm
Size of table . . . . .	2'2" x 2'1½"	660mm x 650mm
Table cants 30° below and 10° above the horizontal.		
Height of table from floor level. . . . .	3'2"	965mm
Horse power of motor . . . . .	1½	1½
Speed of motor in r. p. m. on 50 cycles. . . . .	3,000	3,000
Speed of motor in r. p. m. on 60 cycles. . . . .	3,600	3,600
Floor space . . . . .	2'2" x 2'3"	660mm x 686mm
Net weight in cwts. . . . .	4½ (504lbs.)	229 kilos
Shipping dimensions in cubic feet . . . . .	27	.76 cu. metres

### DETAILS INCLUDED WITH THE MACHINE

Motor and control gear.  
 One sanding bobbin 3½" diameter and table  
 filling in ring.

One set of spanners.  
 Lubricating pump and tin of lubricant.



## INSTALLATION.

The machine is despatched from the Works with all bright surfaces greased to prevent rusting. This must be removed by applying a cloth damped in paraffin or turpentine.

### FOUNDATIONS.

Foundation bolts are not supplied by Wadkin Ltd. unless specially ordered. Rag bolts  $\frac{5}{8}$ " (16 mm) diameter should be used to fix the machine to the floor. If the mill floor consists of 4" (100 mm) to 6" (150 mm) solid concrete no special foundation is necessary. The outline in Fig. 1 gives details of bolt positions and clearances required. Cut 4" (100 mm) to 6" (150 mm) square holes in the concrete and run in liquid cement with bolts in position. A good wooden floor is also satisfactory in which case coach screws are used.

The machine should be carefully levelled before fixing and again after final fixing to ensure that no distortion has taken place.

### WIRING.

For full cabling instructions see pages 8 to 10. Wiring diagram D. 165/3 is for motors on 50 cycles and wiring diagram D. 722 for motors on 60 cycles.

### DUST EXTRACTION.

A hopper is formed in the table itself for dust collection with a  $3\frac{1}{2}$ " (90 mm) diameter outlet for piping connections to a main dust exhaust plant.

## BALL BEARING LIST

Maker's Number	Size			Number Per Machine	Where used on machine.
	Bore	Outside Diameter	Width		
SKF. RM11F	$1\frac{3}{8}$ "	$3\frac{1}{2}$ "	$\frac{7}{8}$ "	1	Top end of motor
SKF. RM9F	$1\frac{1}{8}$ "	2. 13/16"	13/16"	1	Bottom end of motor

# VERTICAL BOBBIN SANDER. TYPE JY.

DIMENSIONS IN FEET, INCHES AND MILLIMETRES.

3 1/2 (90) DIA. STANDARD SANDING BOBBIN. 5 (127) DIA. IS THE MAX. PERMISSIBLE.

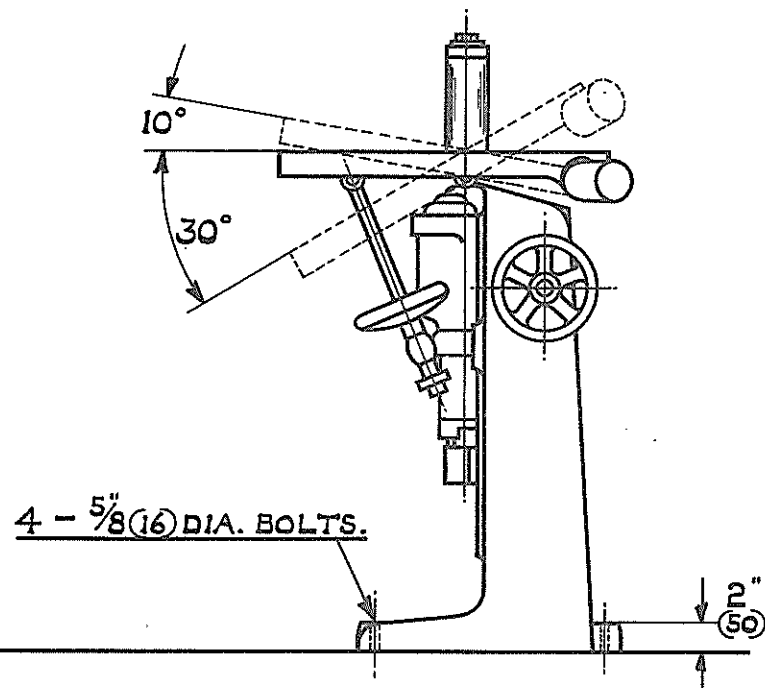
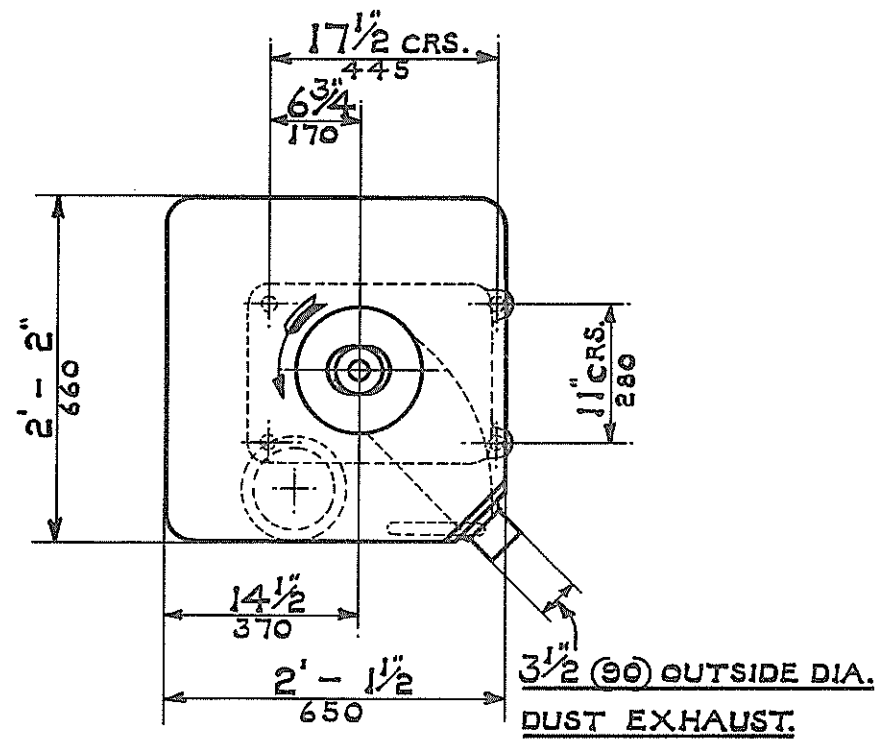
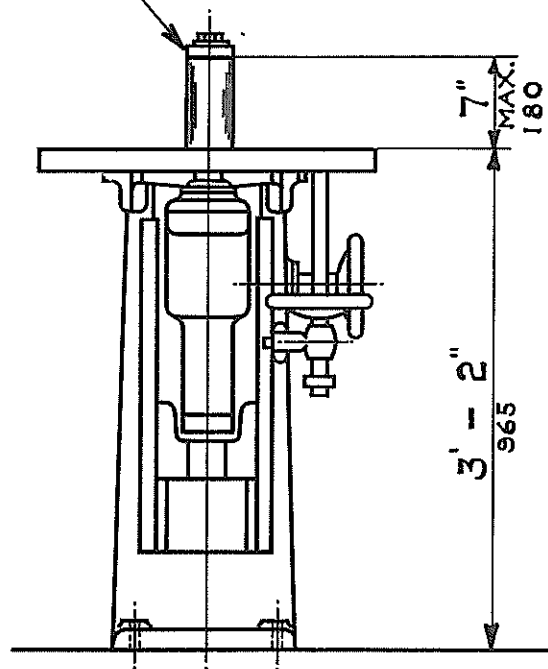


FIG. 1.

LUBRICATION

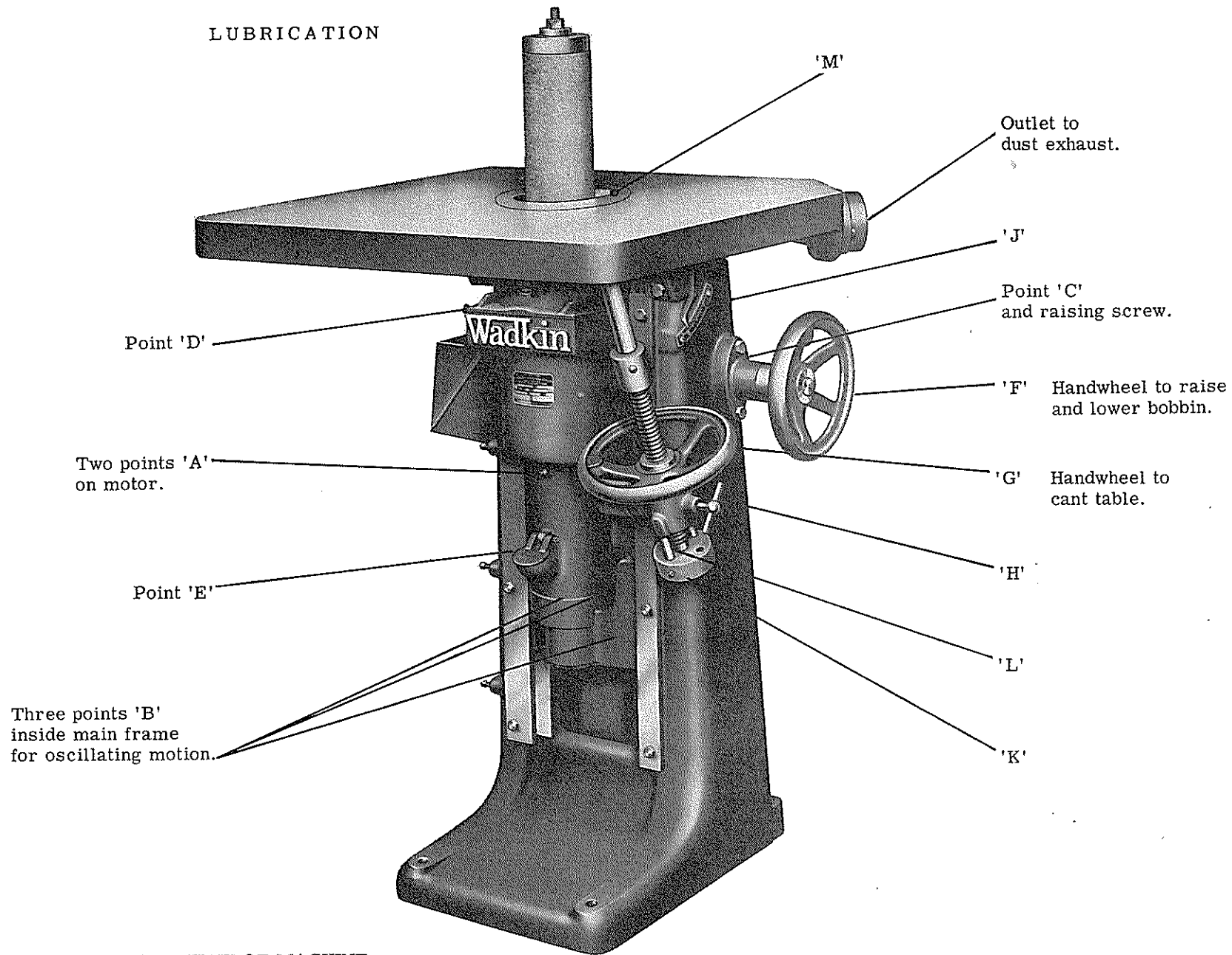


Fig. 2. FRONT VIEW OF MACHINE.

## LUBRICATION

(See Fig. 2)

Every week thoroughly clean down the machine and renew the thin film of oil on all bright parts not in constant use to prevent rusting.

- A 2 POINTS Give 1 or 2 depressions of the grease gun every month using Wadkin Ball Bearing Grease Grade L. 6.
- B 3 POINTS Give 1 depression of grease gun daily using Wadkin Grease Grade L. 6.
- C 1 POINT Oil twice weekly with Wadkin Machine Oil Grade L. 4.
- D 1 POINT Top up weekly with Wadkin Machine Oil Grade L. 4.
- E 1 POINT Inspect and top up every 3 months using Wadkin Gear Oil Grade L. 2.

### WADKIN RANGE OF OIL AND GREASE LUBRICANTS WITH EQUIVALENTS.

	Wadkin Oil Grade L. 2.	Wadkin Oil Grade L. 4.	Wadkin Ballbearing Grease L. 6.
Mobil Oil	D. T. E. / B. B.	Vactra Oil (Heavy Medium)	Mobilux Grease No. 2.
Castrol	Alpha 417	Perfecto N. N.	Spheerol S.
Shell	Vitrea Oil 69	Vitrea Oil 33	Nerita Grease 3
Caltex	Meropa Lubricant No. 2.	Aleph Oil	Regal Starfak No. 2.
Duckham	F. 20	H. 3.	H. S. G.

## SANDING BOBBIN

The bobbin is driven by an electric motor built direct on the spindle, while a reciprocating motion is given to the bobbin by a worm and wormwheel drive. The gears are mounted in a totally enclosed gearbox and run in an oil bath. The carriage forming the unit is counter-balanced, while a screw adjustment is provided to enable the operator to raise or lower the bobbin slide to allow the full length of the abrasive to be used. This motion is operated by handwheel 'F', Fig. 2.

### TABLE

The table is arranged to cant 30 degrees below and 10 degrees above the horizontal. The canting motion is controlled by handwheel 'G', Fig. 2, and screw and locked by locking handle 'H'. A graduated scale 'J' and pointer indicates the angle of the table. Sleeve 'K' on the end of the elevating screw acts as a stop giving the horizontal position on winding up from below the horizontal. When the table is canted above the horizontal the sleeve has to be turned round so that the two pins 'L' will pass through the holes in the sleeve. A loose filling in ring 'M' is provided in order to keep the table opening for the sanding bobbin as small as possible. A different size filling in ring is provided to suit each size of bobbin. The hopper cast in the table is the collecting point for the dust and has an outlet for piping connections to a main exhaust plant.

## CHANGING SANDING BOBBIN AND ABRASIVE.

Unscrew the nut holding the bobbin on the spindle and withdraw the bobbin. The part carrying the paper is in two sections and the key shown in Fig. 3 is used to open the slots. When the slots are apart the worn abrasive can be removed. To avoid breaking the edges of the new abrasive paper they should be bent over  $\frac{1}{2}$ " on a rounded edge of a flat piece of wood. For the coarser grades of abrasive it might prove necessary to slightly dampen the edges before bending. Place the abrasive on the bobbin and close the slot with the key. The closing action stretches the paper and holds it perfectly taut. This type of sanding bobbin can be supplied in  $3\frac{1}{2}$ " and 5" diameter sizes. Other sizes of split bobbins are available with either 2" or  $2\frac{3}{4}$ " diameters. NOTE: Oil the surfaces of the cones at each end of the tightener bolt when a new abrasive is applied.



FIG. 3

## ABRASIVES.

Garnet Paper Rolls of varying grits and grades can be supplied to suit the class of work and desired finish on woodwork. The abrasive for the bobbin is available in 50 yard Rolls 9" wide.

## DUST COLLECTION.

As already mentioned a hopper is formed in the table itself for collection of dust from the bobbin. A nozzle attached to the edge of the table is provided for connecting up to a main exhaust system. Alternatively if no dust collecting system is in existence, a separate collector can be supplied. It comprises a small independent Unit with the exhaust fan built inside the Unit. A series of flameproofed fabric sleeves filters the fine dust before it is deposited into a separate chamber. It can be placed in close proximity to the machine.

## ELECTRICAL INSTALLATION INSTRUCTIONS.

The cabling between the motor and the control gear has been carried out by Wadkin Ltd. , and it is only necessary to bring the line leads to the machine for it to be put into service. This should be done as follows :-

- (1) Fit triple pole isolating switch near the machine, unless this has been supplied to special order by Wadkin Ltd. , when it will be fitted and connected up at the machine.
- (2) Connect the line lead to the appropriate terminals, see diagram. The cables should be taken to the machine in conduit and secured to the control gear by means of locknuts.
- (3) Connect solidly to earth.
- (4) Close isolating switch and press start button. If machine does not rotate in the correct direction, interchange any two incoming line leads.

### FAILURE TO START.

- (1) Electric supply is not available at the machine.
- (2) Fuses have blown or have not been fitted.
- (3) Isolating switch has not been closed.

### STOPPAGE DURING OPERATION AND FAILURE TO RESTART.

- (1) Fuses have blown.
- (2) Overloads have tripped.

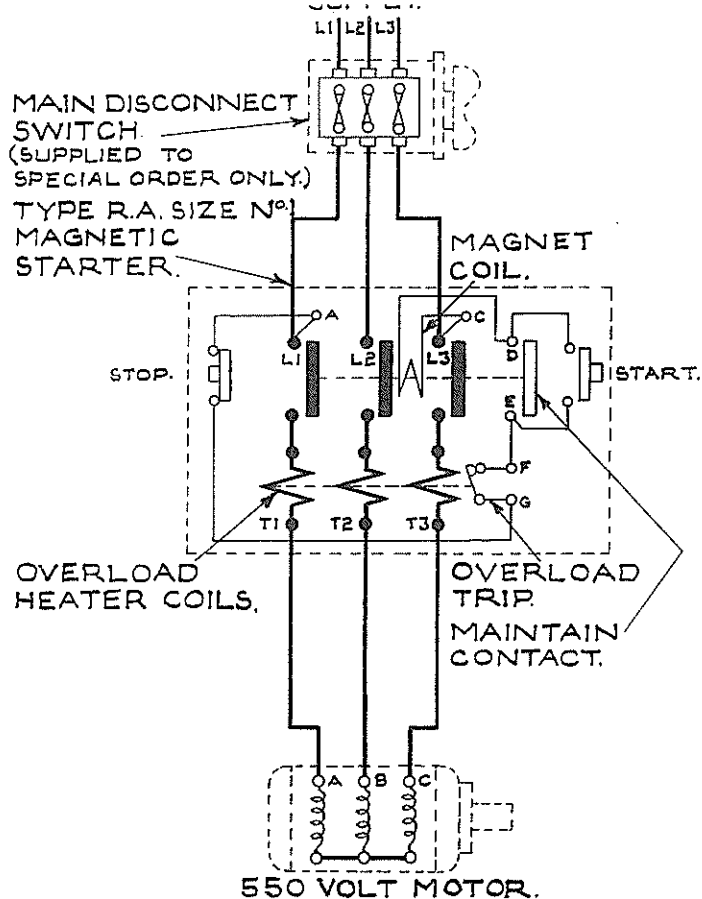
### ADJUSTMENT. (50 cycle machine only).

For a finer overload setting, set the load indicator to a lower value, and vice-versa for a less fine setting.

### GENERAL.

Check the earth connection from time to time. Users are recommended to display in an appropriate position in the maintenance department Wadkin Electrical Maintenance Instruction Card, No. 356, which is issued gratis on application.





**INSTALLATION INSTRUCTIONS**

FIT MAIN DISCONNECT SWITCH NEAR MACHINE SO THAT THE ELECTRICAL GEAR MAY READILY BE ISOLATED FOR INSPECTION PURPOSES. BRING SUPPLY CABLES TO MAIN DISCONNECT SWITCH AND TO L1-L2-L3 AT MAGNETIC STARTER THROUGH CONDUIT WHICH SHOULD BE SECURED TO THE STARTER CASE BY MEANS OF LOCKNUTS. ENSURE THAT THE DIRECTION OF ROTATION IS CORRECT BEFORE PUTTING THE MACHINE INTO SERVICE, TO REVERSE ROTATION INTERCHANGE L1 AND L3 AT MAGNETIC STARTER.

**OPERATING INSTRUCTIONS.**

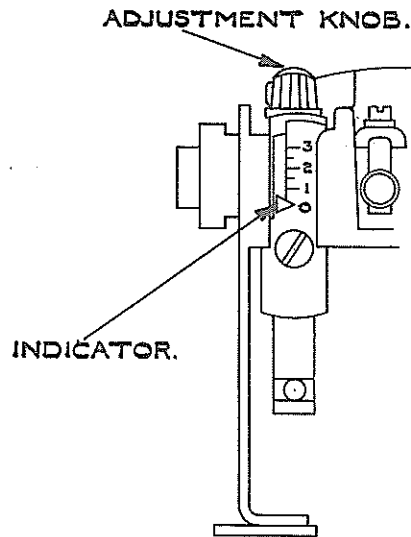
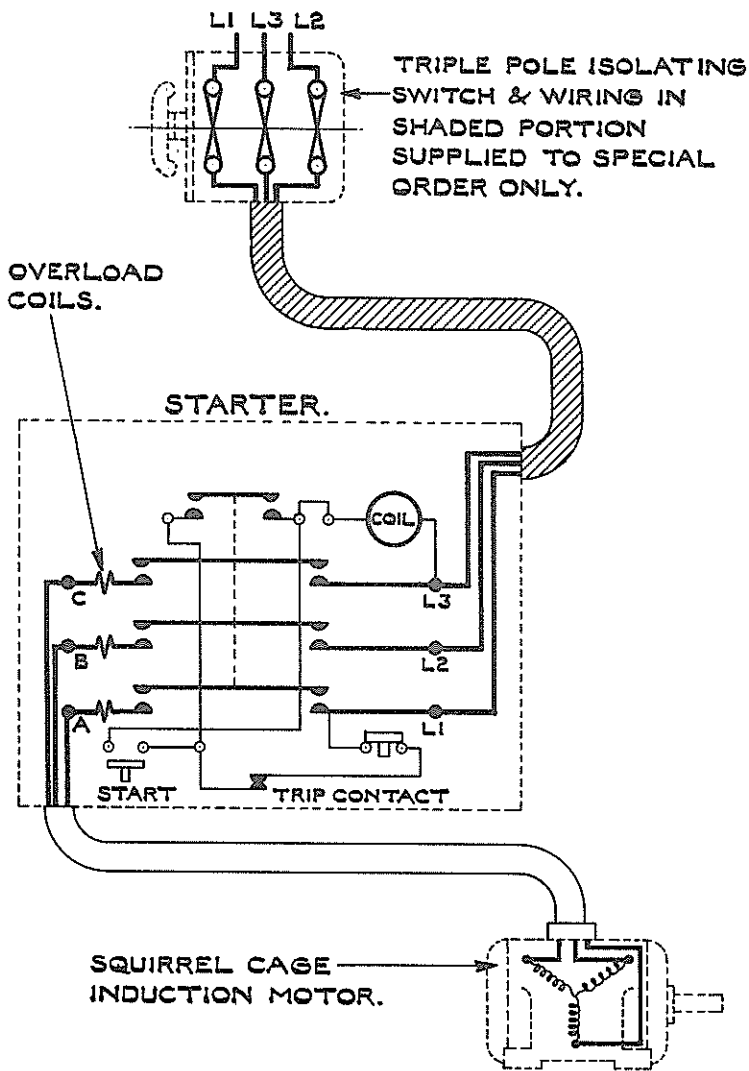
TO START MACHINE: CLOSE MAIN DISCONNECT SWITCH AND PRESS 'START' BUTTON. TO STOP MACHINE: PRESS 'STOP' BUTTON.

**OVERLOAD.**

SHOULD THE MACHINE STOP DUE TO OVERLOAD, THE OVERLOAD TRIP SWITCH SHOULD BE RESET BY DEPRESSING THE PLUNGER ON THE OVERLOAD ASSEMBLY, THEN START IN THE USUAL MANNER.

DUAL VOLTAGE MOTOR CONNECTIONS.			
WHEN DUAL VOLTAGE MOTORS ARE SUPPLIED WITH 9 LEADS THE CONNECTIONS SHOWN BELOW ARE NECESSARY. SERIES/STAR- 440 VOLTS. PARALLEL/STAR-220VOLTS.		WHEN DUAL VOLTAGE MOTORS ARE SUPPLIED WITH 6 LEADS THE CONNECTIONS SHOWN BELOW ARE NECESSARY. STAR- 340/440 VOLTS. DELTA-200/250 VOLTS.	
TO T1-T2-T3 AT STARTER.	TO T1-T2-T3 AT STARTER.	TO T1-T2-T3 AT STARTER.	TO T1-T2-T3 AT STARTER.
SERIES/STAR	PARALLEL/STAR	STAR	DELTA
9 LEAD MOTORS.		6 LEAD MOTORS.	


DIAGRAM OF CONNECTIONS. D.722



#### TO SET OVERLOAD TRIPS.

MOVE INDICATOR TO FULL LOAD CURRENT OF MOTOR. TRIPS WILL THEN OPERATE AT APPROXIMATELY 20% TO 30% OVERLOAD AFTER ATTAINING FULL LOAD TEMPERATURE.

#### INSTALLATION INSTRUCTIONS.

FIT TRIPLE POLE ISOLATING SWITCH NEAR MACHINE UNLESS SUPPLIED BY WADKIN LTD. TO SPECIAL ORDER SO THAT THE ELECTRICAL GEAR MAY READILY BE ISOLATED FOR INSPECTION PURPOSES. BRING LINE CABLES TO ISOLATING SWITCH AND TO L1 - L2 - L3 AT CONTACTOR WHICH SHOULD BE SCREWED INTO THE MACHINE AND SECURED BY MEANS OF LOCKNUTS. CABLING SHOWN THUS  TO BE CARRIED OUT BY CUSTOMER UNLESS ISOLATING SWITCH HAS BEEN FITTED BY WADKIN LTD.

#### OPERATING INSTRUCTIONS.

TO START, CLOSE ISOLATING SWITCH AND PRESS GREEN BUTTON MARKED "ON". TO STOP PRESS RED BUTTON MARKED "STOP" EARTH MACHINE.

#### OVERLOAD.

FOR A FINER SETTING OF OVERLOAD, SET LOAD INDICATOR TO A LOWER VALUE AND VICE VERSA FOR A LESS FINE SETTING. LOAD INDICATOR SHOULD ONLY BE MOVED A SMALL AMOUNT AT A TIME. SHOULD THE MOTOR STOP DUE TO OVERLOAD WAIT FOR A SHORT TIME TO ALLOW THE RELAYS TO COOL AND THEN START IN THE USUAL MANNER.

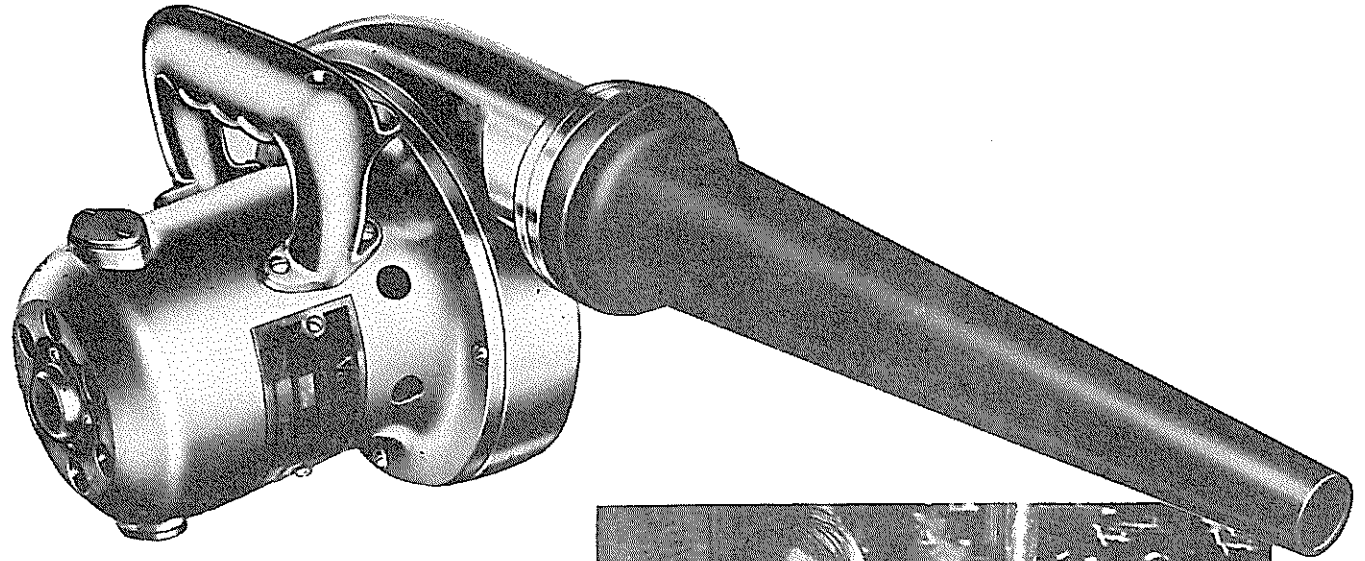
#### ROTATION.

ENSURE THAT DIRECTION OF ROTATION IS CORRECT BEFORE PUTTING MACHINE INTO SERVICE. TO REVERSE ROTATION INTERCHANGE LEADS L1 & L2

WADKIN LTD.  
LEICESTER.

DIAGRAM OF CONNECTIONS.

D. 165/3.



## **... blow away harmful dust, chips and dirt with a Wadkin Electric Blower**

No motor can run at its maximum efficiency with its ventilating duct or control gear covered with dust and dirt. Sooner or later the resultant overheating will cause serious trouble.

Similarly, accumulations of chips and dust, in the mechanical parts of the machine can interfere with its efficiency. A few minutes a week for blowing down all Woodworking Machinery will be amply repaid in better and easier running, in increased life, and freedom from breakdown.

Blowers can be supplied for single phase A.C. or Direct Current for any voltage up to 250.

Please state voltage when ordering.

