

Clarke®

METALWORKER



20mm DRILL PRESS

Model Nos. CDP501F

Part No. 6505590

OPERATING & MAINTENANCE INSTRUCTIONS



SERIAL No.....

0307

Clarke[®] INTERNATIONAL



DECLARATION OF CONFORMITY

We declare that this product complies to the following standards/directives:

■ **98/37/EC**

Product Description: **DRILL PRESS**

Model Number: **CDP RANGE**

Serial Number: See Front Cover

Signed 
Engineering Manager

Clarke INTERNATIONAL
Hemnal Street, Epping, Essex CM16 4LG

Clarke International is a trading style of Clarke International Limited



When disposing of this product, do not dispose of with general waste. It must be disposed of according to law at a recognised disposal facility.

INTRODUCTION

Thank you for purchasing your CLARKE 20mm Drill Press.

Before attempting to operate the machine, please read this instruction manual thoroughly, and follow all directions carefully. By doing so you will ensure the safety of both yourself and others around you, and at the same time, you should look forward to long and trouble free service from your Clarke Drill Press.

GUARANTEE

This product is guaranteed against faults in manufacture for 12 months from date of purchase. Keep your receipt as proof of purchase. This guarantee is invalid if the product has been found to have been abused or tampered with in any way, or not used for the purpose for which it was intended. The reason for return must be clearly stated. This guarantee does not affect your statutory rights.

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GENERAL SAFETY PRECAUTIONS

WARNING

As with all machinery, there are certain hazards involved with their operation and use. Exercising respect and caution will considerably lessen the risk of personal injury. However, if normal safety precautions are overlooked, or ignored, personal injury to the operator, or damage to property may result.

1. **KNOW YOUR MACHINE.** Read the manual carefully. Learn the machines applications and limitations, as well as the specific potential hazards peculiar to it.
2. **KEEP GUARDS IN PLACE** and in working order.
3. **EARTH ALL MACHINES.** If the machine is equipped with three-pin plug, it should be plugged into a three-pin electrical socket. Never remove the earth pin.
4. **REMOVE ALL ADJUSTING KEYS AND WRENCHES.** Before starting, form the habit of checking to ensure that keys, wrenches and tools are removed from the machine.
5. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
6. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use machinery in damp or wet locations, or expose them to rain. Keep work area well lit.
7. **MAKE WORKSHOP CHILDPROOF** - with padlocks, master switches etc.
8. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area
9. **DON'T FORCE THE MACHINE.** It will do the job better and safer, at the rate for which it was designed.
10. **USE THE RIGHT TOOL.** Don't force a tool or attachment to do a job for which it was not designed.
11. **WEAR PROPER APPAREL.** Loose clothing, gloves, neckties, rings, bracelets, or other jewellery may get caught in moving parts. Nonslip footwear is recommended. Long hair should be contained.
12. **USE SAFETY GLASSES.** Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
13. **USE EAR DEFENDERS.**
14. **DON'T OVERREACH.** Keep proper footing and balance at all times.
15. **MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. **ALWAYS DISCONNECT THE MACHINE** before servicing or changing accessories.
17. **CHECK FOR DAMAGE.** If part of the machine (eg. A cover or guard), is damaged, it should be carefully inspected to ensure that it can perform its' intended function correctly. If in doubt, the part should be renewed. Damage to moving parts or major components should be Inspected by a qualified technician before operating the machine. Contact your local dealer for advice.

19. DO NOT STAND ON THE MACHINE. Serious injury could occur if the machine is tipped over. Do not store materials above or near the machine such that it is necessary to stand on the machine to get to them.
20. NEVER operate a machine when under the influence of alcohol, drugs or medication.
21. ALWAYS ENSURE THAT ADEQUATE LIGHTING is available. A minimum intensity of 300 lux should be provided. Ensure that lighting is placed so that you will not be working in your own shadow.

ADDITIONAL SAFETY RULES FOR DRILL PRESSES

WARNING:

THIS MACHINE MUST NOT BE MODIFIED, OR USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS DESIGNED.

1. IMPORTANT: You should not operate this machine unless you are thoroughly familiar with drilling machines and drilling techniques. If there is any doubt whatsoever, you should consult a qualified person.
2. Do not operate the machine until it is completely assembled, and you have read, and understood, this entire manual
3. Ensure the proper electrical regulations are followed, and that the machine is properly earthed.
4. Before switching the machine ON, ALWAYS:-
 - a. Ensure all chuck keys, spanners and wrenches are removed from the machine.
 - b. Examine the setup carefully, ensuring that the workpiece is perfectly secure.
 - c. Ensure your clothing is properly adjusted.
5. Make all adjustments with the power OFF.
6. Always use the correct drilling speeds for the drill size, and the type of material being drilled (see page 22).
7. NEVER leave the drill unattended whilst it is running. Turn the machine OFF and do not leave until it has come to a complete stop.
8. When you have finished with the machine, always remove and store the drill bits.
9. CAUTION: This Drill Press is designed for use with Drill Bits and Morticing attachments ONLY. The use of other cutting tools or accessories could be hazardous.
10. ALWAYS use clamps, or a drill vice bolted to the table, to hold the work. It should NEVER be held in bare hands.

ELECTRICAL CONNECTIONS

Connect the mains lead to a standard, 230 Volt (50Hz) electrical supply through an approved 13 amp BS 1363 plug, or a suitably fused isolator switch.

WARNING! THIS APPLIANCE MUST BE EARTHED

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:

- Green & Yellow - Earth
- Blue - Neutral
- Brown - Live

As the colours of the flexible lead of this appliance may not correspond with the coloured markings identifying terminals in your plug proceed as follows:

Connect GREEN & YELLOW cord to terminal marked with a letter "E" or Earth symbol " \perp " or coloured GREEN or GREEN & YELLOW.

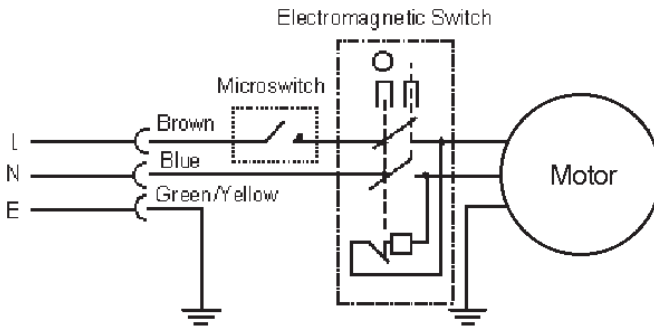
Connect BROWN cord to terminal marked with a letter "L" or coloured RED.

Connect BLUE cord to terminal marked with a letter "N" or coloured BLACK.

If this appliance is fitted with a plug which is moulded onto the electric cable (i.e. non-rewirable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer or most electrical stockists.
5. The fuse in the plug must be replaced with one of the same rating (**13 amps**) and this replacement must be ASTA approved to BS1363.

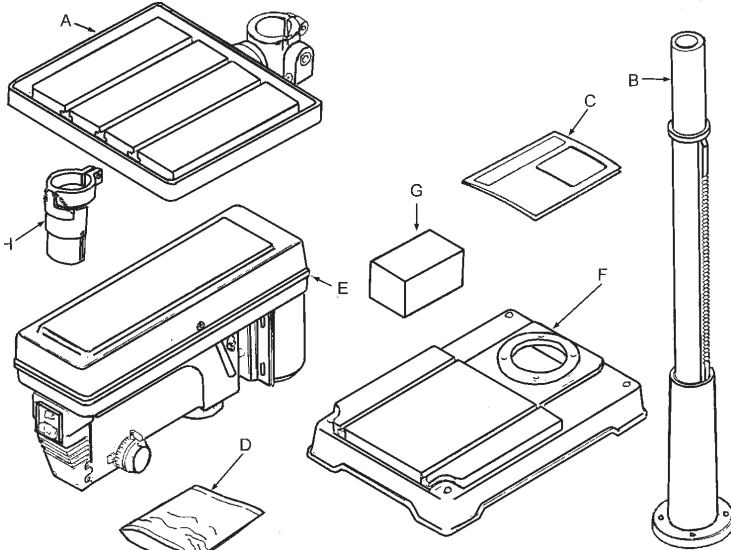
WIRING DIAGRAM



PREPARATION

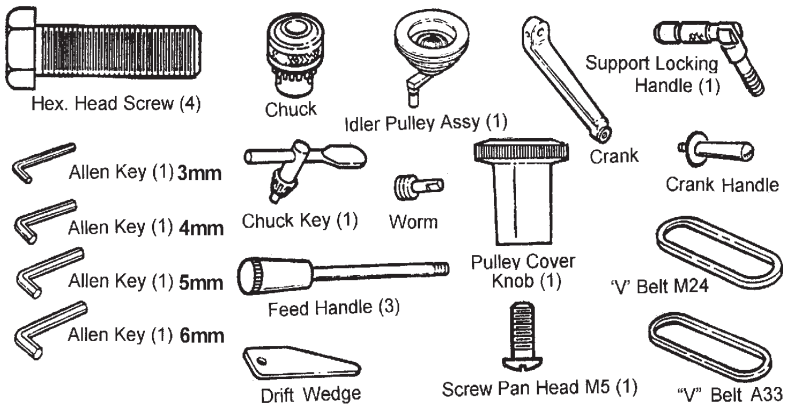
On receipt, carefully unpack the components, ensuring that no damage was suffered in transit, and that all parts are accounted for.

The following loose items are to be found in the packing case.



- | | | | |
|----|-----------------------|----|----------------------|
| A. | Table Assy. | E. | Head Assy. |
| B. | Column Assy | F. | Base |
| C. | This Manual | G. | 1xBox of loose parts |
| D. | 1 xBag of loose parts | H. | Chuck Guard Assy. |

Loose Items in Box and Bag



Check the parts against the above list and refer to the above diagrams. Should there be any deficiencies or damage, please contact your CLARKE dealer immediately .

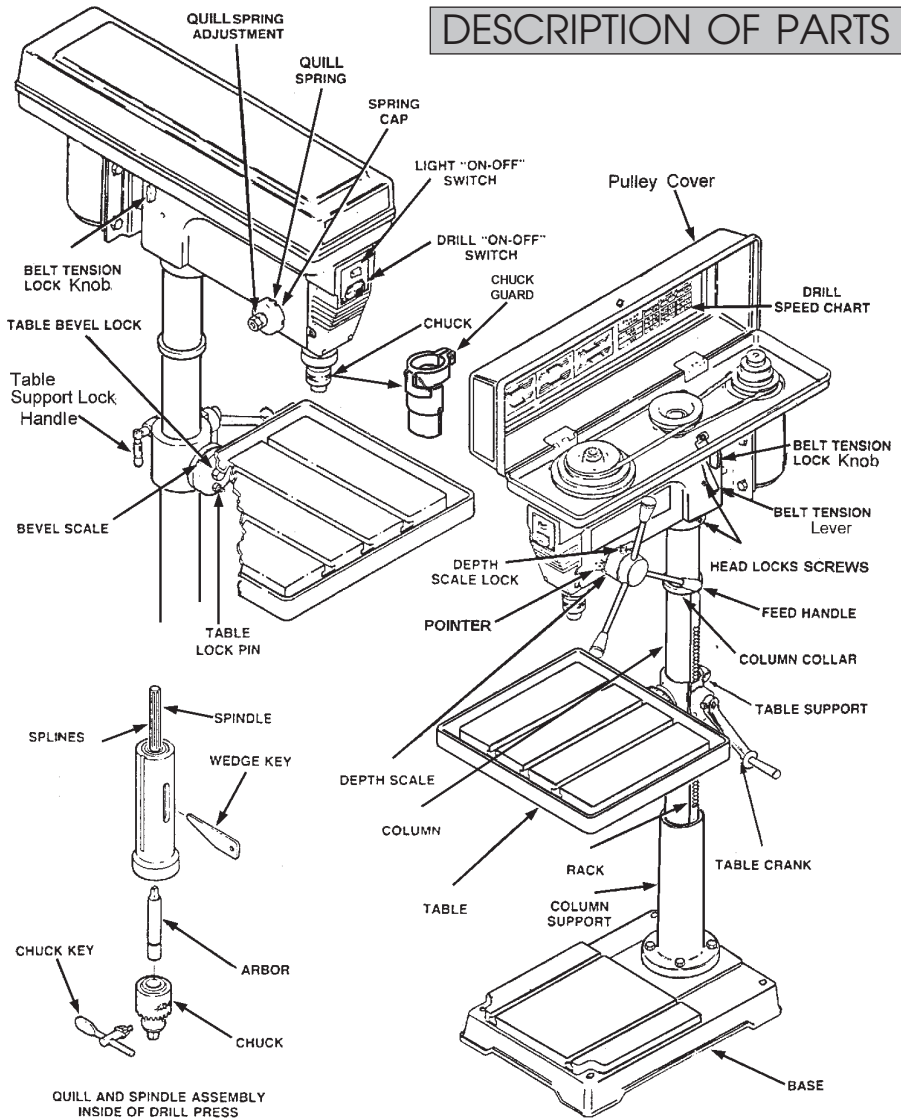
Remove all traces of preservative from the components with paraffin or a good quality solvent, and wipe all parts thoroughly with a clean dry cloth. Apply a coating of wax paste or light oil, to the table, column and base, to prevent rust.

Take the necessary precautions when lifting components, considering their weight. **Assistance will be required.**

Before use, the machine must be securely bolted to a floor of sufficient strength to withstand the weight of the drill press plus anticipated work. If necessary get professional advice.

Ensure the location is adequately lit, and that you will not be working in your own shadow.

DESCRIPTION OF PARTS



ASSEMBLY

CAUTION!

DO NOT ATTEMPT TO ASSEMBLE THIS MACHINE SINGLE HANDED..ASSISTANCE MUST BE USED

A. Column Assembly to Base (Ref Parts List/Diagram page 18)

NOTE: Ideally, the base should be firmly bolted to the floor prior to assembly of other components. The mounting surface must flat, level, and capable of supporting the weight of the drill plus anticipated work.

With the Base on a flat level surface, bolt on the Column Support (8) complete with Column and Table Support, using the 4, M12 Hex head screws (9) provided, and tighten them fully.

B. Mounting the Table Assembly

1. From the box of loose parts, locate the worm, and install it in the Gear Housing of the Table Support, liberally greased and pushed fully home.
2. Push the the crank on to the worm spigot, protruding from the gear housing, as far as it will go and tighten the crank's grub screw on to the flat on the spigot.
3. Screw the crank handle into the crank and tighten fully.
4. Slacken the Collar grub screw (see fig.2), using the 3mm hex. wrench provided, and remove the Collar and Rack from the Column.
5. With assistance, raise the table and insert the rack into the Gear Housing with the long smooth end uppermost, as shown in fig. 3, and engaged with the gear within the housing.
6. Lower the complete assembly down on to the Column so that the lower end of the rack rests in the 'vee' created between the Column Support and the Column, then screw in and nip up the Table Support Locking Handle to secure the table temporarily in this position.

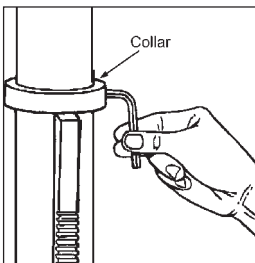


Fig. 2

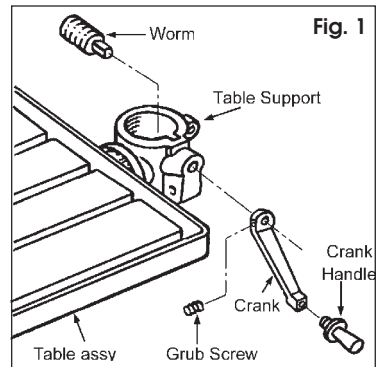


Fig. 1

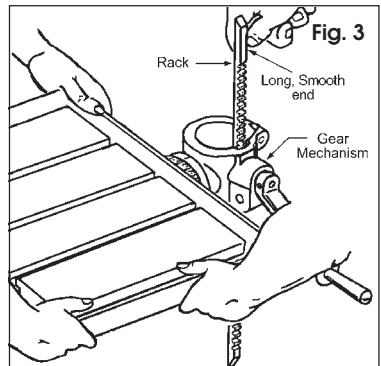


Fig. 3

7. Slide the top collar back into place and tighten the grub screw, ensuring there is sufficient clearance between the collar and the Rack to allow the Rack to move smoothly within the Collar (as the table swings around the column), without appreciable slack. It will be necessary to slacken the Table Support Locking Handle to test its operation. Check also to ensure the table moves smoothly and freely from top to bottom of the Rack, by winding the crank.

C. Head to Column

NOTE: It may be necessary to unscrew the Head Lock Set Screws (A, fig.4) slightly, to ensure they do not protrude internally as this would prevent the head from sliding fully into position.

1. With assistance, raise the head and locate it on top of the Column.
2. Align the head with the base, and firmly secure with the set screws provided, (A- Fig.4).
3. Locate the three feed handles (items 18 & 19 page 17), and screw them firmly into the hub of the spindle feed shaft (item 20, page 17).

Fig. 4

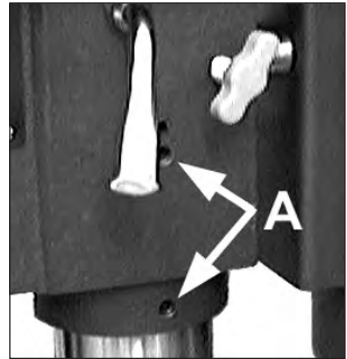


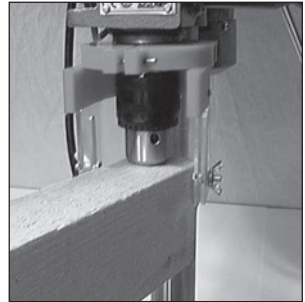
Fig. 5

D. Chuck Guard Assembly.

NOTE: This operation should be carried out before the chuck is installed.

Slide the Chuck Guard over the Quill Shaft, turn it so that the pinch bolt faces the front (as shown in fig.5), then nip up the pinch bolt to temporarily secure it in this position.

IMPORTANT: Ensure the Quill Shaft/Spindle is at the top of its travel.



E. Installing the Chuck.

1. With the chuck guard lifted clear of the spindle nose, wind the table up the column and secure it to within 6" of the spindle.
2. Open the jaws of the chuck to their maximum, using the chuck key supplied.
3. Put a piece of scrap wood on to the table to protect the chuck nose.
4. Ensuring all parts are thoroughly clean, dry, and burr free, Slide the arbour into the Quill and push home, turning as you do so, to ensure the tang, on its end, seats correctly. Place the chuck over the end of the arbour and pull the spindle down using the feed handles, pressing the chuck jaws hard against the piece of scrap wood until the chuck is forced home. (Fig.4).

Fig.6

F. Fitting the Drive Belts.

1. Undo the Belt Tension Lock Knobs (one either side of the head - A-Fig.6), and turn the Belt Tension Lever (B) clockwise to bring the Motor Pulley closer to the Spindle Pulley. This will allow the belts to be slipped on with ease.
2. Lubricate the Idler Pulley Pivot shaft (item 4, page 19) and Idler Pulley, with light grease and install in its' mounting between the Motor and Spindle Pulleys.
3. Consult the chart inside the belt cover (duplicated on page 14), and fit the belts in the positions corresponding to spindle/drill speed required.



- Turn the Belt Tension Lever (B - fig.6), anticlockwise so that tension is applied to the belts. Tension is correct when the belts deflect by approx. ½" at their centres of run when using reasonable thumb pressure. Lock the motor in this position with the Lock Knobs.

NOTE: The idler pulley will 'float' so that tension is applied equally to both belts

CHECKING THE OPERATION OF THE MICROSWITCH

IMPORTANT:

When closing the pulley cover, check the operation of the Microswitch. It is important that it operates immediately the cover is pulled open, to stop the motor,.....NOT when the cover is opened sufficiently for fingers to be inserted.

If necessary, bend the actuating tab, which is attached to the cover, to ensure this.

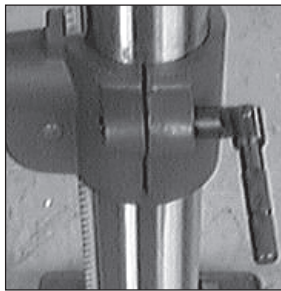
G. Pulley Cover Knob.

Locate the knob, with pan head screw, and attach to the cover, screwing on tightly.

SETTINGS and ADJUSTMENTS

I. Table.

Fig. 9



**Table Support
Locking Handle**

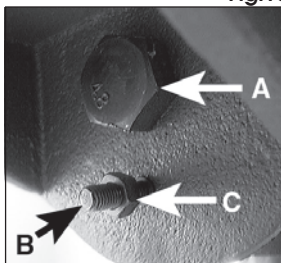
The table may be raised, lowered or swivelled about the column, by slackening off the table support locking handle, (Fig.9), adjusting accordingly, using the table crank, and re-tightening the locking handle.

If the table assembly moves stiffly when being swivelled about the column, slacken the upper collar grub screw (at the rack) to allow the collar to move very slightly, thereby providing a little more clearance between the rack and collar. Tighten the grub screw when satisfied.

The table may also be tilted, as shown in fig.8, as follows:
The table is secured to the table support with a single M20x50mm screw, shown at A - fig. 10, and is located by peg B.

In order to tilt the table, it is first of all necessary to remove peg B. This is achieved by screwing the nut - C, clockwise i.e. screwing 'in'. The peg will be drawn out as you do so.

Fig.10



With the locating peg removed, slacken off the securing screw - A, and tilt the table to your desired angle, as indicated on the scale, shown in fig. 11, then tighten the securing screw A. For all normal operations, the table should be set to 0° and located by peg B, fig.10..

To return the table to its normal position,slacken the securing screw - A, and tilt the table so that the mark on the table lines up with the 0° mark on the tilt scale, as shown in fig. 11. Nip up the securing screw (do not tighten).

Fig. 8



**Table shown tilted and
swivelled about the column**

Spin the nut C - fig. 10, so that it is towards the end of the thread on the peg. Lightly oil the smooth tapered end of the peg before inserting it into the hole in the mounting, and into the corresponding hole in the table support. It may be necessary to turn the table slightly in order to line up the holes. Tap the peg home gently, using a soft headed mallet or copper hammer. Finally screw the nut in, but only until it comes into contact with the housing.

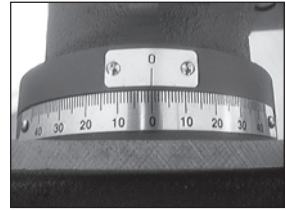


Fig. 11

Table Tilt Scale

2. Spindle Depth. (Ref. Fig. 12)

Located around the spindle feed shaft is a Depth Stop Collar, carrying a graduated scale (A). The collar is capable of turning about the shaft, and may be locked in place by a Locking Screw (B). Graduations are imperial (inches) and metric (mm).

To set a drilling depth:

1. Lower the drill (with the power OFF) so that it contacts the work, and hold in that position.
2. Slacken off the locking screw, and turn the collar so that the measurement for the depth of hole required is in line with the pointer (C). Lock the collar in this position using the locking screw.

The drill is now set to drill holes to your pre-determined depth, from that particular start point. i.e. Providing the surface of your workpiece is flat and level, you may drill a series of holes, each to the same depth.

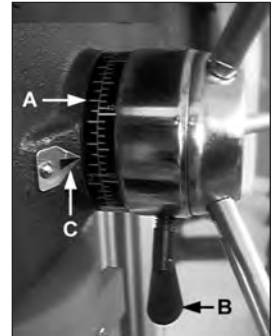


Fig. 12

3. Changing Drill (Spindle) Speed.

Before changing the speeds, ensure the machine is switched OFF, and disconnected from the mains supply.

1. Undo the Belt Tension Lock Knobs (A - fig.13), one either side of the head and turn lever B clockwise to relieve any tension on the belts. Referring to the chart inside the belt cover (which is duplicated on page 14), fit the belts in the positions corresponding to the spindle speed required.
2. Lever the motor, on its bracket, away from the head, by turning lever B - fig.13, anti-clockwise so that tension is applied to the belts.



Fig. 13

NOTE: The idler pulley will 'float' so that tension is equally applied to both belts

Tension is correct, when the belts deflect by approx. 1/2" at their centre when using reasonable pressure with the thumb and forefinger.

Lock the motor in this position tightening the two lock knobs - A.

NOTE: If the belt should slip whilst drilling, adjust the belt tension.

OPERATION.

1. Insert the drill bit into the jaws of the chuck by approx 1", ensuring that the jaws do not touch the flutes of the drill. Before tightening the chuck, ensure that the drill is centred within the jaws.
2. Ensure the table height and position is set so that drill travel is sufficient for the job in hand.
3. Ensure the work is securely clamped, or held in a drill vice bolted to the table. Never hold it with bare hands. Severe personal injury may be caused if the workpiece is whipped out of the operator's hand, and, damage to the machine incurred if the work strikes the column.

If the piece is of irregular shape and cannot be laid flat on the table, it should be securely blocked and clamped.

Any tilting, twisting, or shifting, results not only in a rough hole but also increases drill breakage.

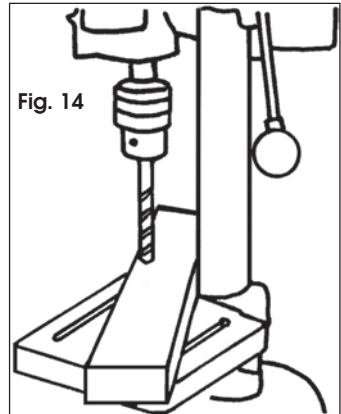
4. For small workpieces that cannot be clamped to the table, use a Drill Press Vice. The vice must be clamped or bolted to the table.
5. When drilling completely through wood, always position a piece of scrap wood between the workpiece and the table to prevent splintering on the underside of the workpiece as the drill breaks through.

The scrap piece of wood must make contact with the left side of the column as shown in Fig 14. In addition, set the depth of drill travel so that the drill cannot possibly come into contact with the table, or, align the table so that the hole in its' centre is in line with the drill bit.

6. When completely satisfied that the setup is sound, lower the Chuck Guard into place and switch the machine ON by raising the switch cover, as shown in fig. 15, and pushing the 'I' button. To switch OFF, hit the switch cover which will push the 'O' button, turning the machine OFF.

NOTE:

- a. As a safety feature, the ON/OFF switch is a No Volt Release type. Therefore, if the power is interrupted whilst the machine is switched ON, it will not automatically start when the power is restored.
- b. A Micro switch is provided within the Pulley Cover which prevents the machine from operating unless the Pulley Cover is firmly closed.
- c. A lamp is provided, built into the head. The switch is located on the front panel, directly below the ON/OFF switch



**Drill Press Vices, Cross Vices and Clamps,
are available from your CLARKE dealer.**

REMOVING THE CHUCK

To remove the chuck, pull the spindle down fully, using the feed handles. The slot in the side of the Quill will become visible, as shown in fig. 14. Note the position of the chuck, perhaps by placing a chalk mark, in line with the chuck, on the column, then raise the table so that it is only an inch or so below the position marked.

Place a thick cloth, or similar, on the table to catch the chuck, to prevent damage when it drops, then pull down the spindle once more, until the slot in the Quill tube is visible. Insert the drive wedge into the slot and give it a sharp tap, preferably with a copper hammer. This will break the seal between the quill tube and the arbour, allowing the chuck to fall free, on to the cloth on the table.

To disconnect the chuck from the arbour, give it a sharp tap with a soft head mallet to break the taper seal.

NOTE: Morse taper drills (MT2), may also be used with this machine, and are inserted into the Quill to replace the arbour. Removal is the same as that for removing the chuck.

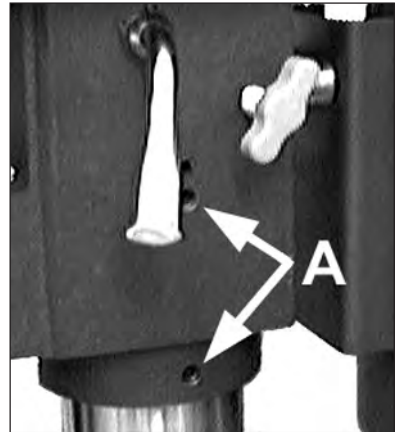


Fig. 16

MAINTENANCE

For maximum performance it is essential that the Drill Press is properly maintained. Always inspect before use. Any damage should be repaired and faults rectified.

If the mains lead is worn, cut or damaged, in any way, it should be replaced immediately. Refer to the trouble shooting chart on page 15. If you are unable to rectify faults, contact your local dealer or Clarke International Service Division on 020 8556 4443 for assistance.

After use.....Remove all swarf from the machine and thoroughly clean all surfaces. Components should be dry, with machined surfaces lightly oiled.

Monthly (When in constant use)

- Check tightness of mounting bolts, and, head and column securing set screws.
- Check belt for wear and replace if frayed or damaged in any way.
- Blow out any dust that may have accumulated in the motor fan.
- Apply a thin coat of wax paste or light oil to the table and column, for lubrication and to help prevent corrosion.

NOTE:

Always remove drill bits and store in a safe place.

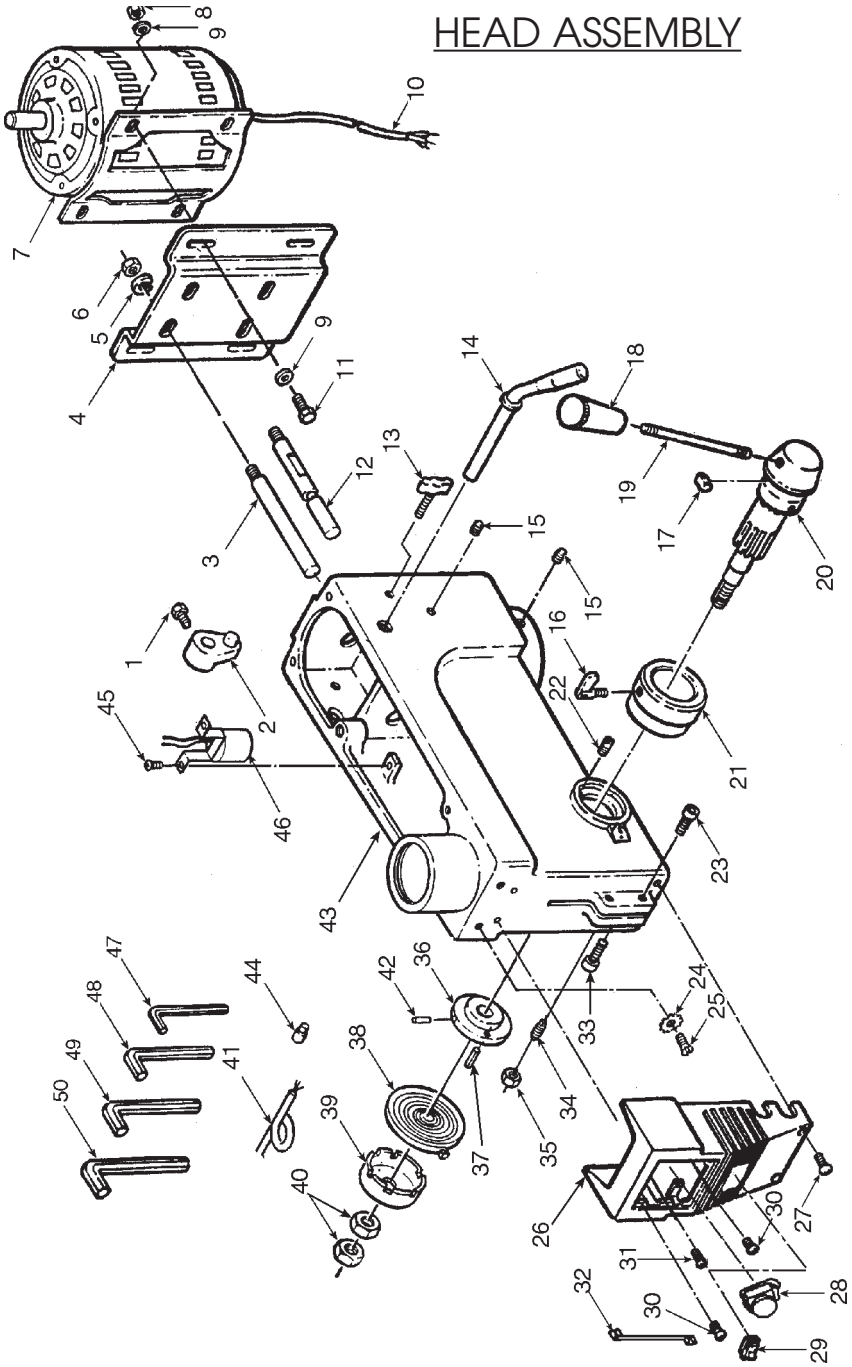
All bearings are packed with grease at the factory and require no further lubrication.

TROUBLE SHOOTING

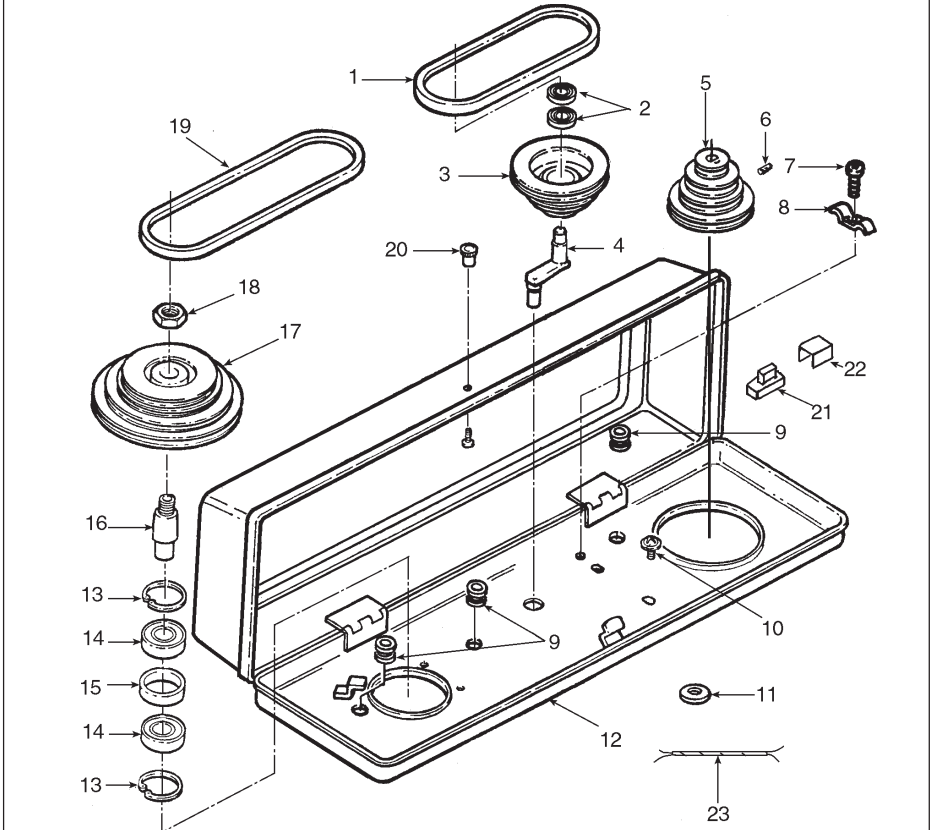
| PROBLEM | PROBABLE CAUSE | REMEDY |
|------------------------------|--|--|
| Noisy operation (under load) | <ul style="list-style-type: none"> A) Incorrect belt tension B) Dry spindle C) Loose pulley D) Worn bearing | <ul style="list-style-type: none"> A) Adjust tension B) Remove spindle/quill assembly and lubricate C) Tighten pulley D) Replace bearing |
| Excessive drill wobble | <ul style="list-style-type: none"> A) Loose chuck B) Worn spindle, or bearing C) Worn chuck D) Bent drill | <ul style="list-style-type: none"> A) Tighten by pressing chuck down on to a block of wood against the table. B) Replace spindle shaft or bearing C) Replace chuck D) Renew Drill |
| Motor won't start | <ul style="list-style-type: none"> A) Power supply B) Motor connection C) NVR Switch connections D) Faulty switch E) Motor windings burned F) Pulley Cover not closed G) Micro Switch inoperative | <ul style="list-style-type: none"> A) Check power cord/fuse B) Check motor connections C) Check switch connections D) Replace switch E) Replace motor F) Close pulley cover. G) Check operation of micro switch, See P11 - and renew if faulty |
| Drill binds in workpiece | <ul style="list-style-type: none"> A) Excessive feed pressure B) Loose belt C) Loose drill D) Incorrect drill speed. E) Drill profile incorrect for type of material | <ul style="list-style-type: none"> A) Apply less pressure B) Check belt tension C) Tighten drill with key D) Refer to Cutting Speed chart, and adjust drill speed accordingly E) Consult an appropriate manual re. Materials, Drills and Cutting Angles, and sharpen drill accordingly. |
| Drill burns or smokes | <ul style="list-style-type: none"> A) Incorrect speed. B) Chips are not discharging C) Dull drill or incorrect profile for material D) Lack of coolant E) Excessive feed pressure | <ul style="list-style-type: none"> A) Refer to Cutting Speed chart, and adjust drill speed accordingly B) Clean drill C) As 'E' above D) Use coolant whilst drilling E) Apply less pressure |
| Table difficult to raise | <ul style="list-style-type: none"> A) Needs lubrication B) Table lock tightened | <ul style="list-style-type: none"> A) Lubricate with light oil B) Loosen clamp |

| No. | Description | Part No. |
|-----|---------------------------------|--------------|
| 1 | Hex. Hd Screw M8 | 3044500 |
| 2 | Adjusting Lever | DD16102006 |
| 3 | Motor Bracket | DD20102003 |
| 4 | Motor Mounting | DD16102007B |
| 5 | Lockwasher 12mm | DDGB93-87 |
| 6 | Hex. Nut M12 | 3040603 |
| 7 | Motor | DDYL8034 |
| 8 | Hex Nut. M8 | 3040601 |
| 9 | Washer M8 | DDGB972-85 |
| 10 | Motor Cable | DD20102016 |
| 11 | Hex. Screw M8 | 3040502 |
| 13 | Belt Tension Lock Knob | DD16102005 |
| 14 | Belt Tension Lever | DD21002004 |
| 15 | Skt. Screw Set M10 | DDGB80-85 |
| 16 | Depth Screw Lock | DD16104012 |
| 17 | Scale Guide | DD16104004 |
| 18 | Knob | DD20104011 |
| 19 | Feed Handle | DD21004005 |
| 20 | SpindleShaft | DD16104000 |
| 21 | Depth Stop Collar w/Scale | DD6104003 |
| 22 | Stop Pin | DD16104010 |
| 23 | Skt. Screw Hd. M8 | 3040502 |
| 24 | Lock washer Ext. M5 | DDGB8621-87 |
| 25 | Pan Hd.Screw M5 | DDGB818-85 |
| 26 | Switch Box | DD20102008 |
| 27 | Pan Hd Screw Cr M6 | 3040543 |
| 28 | No Voltage Switch | DD1KJD12 |
| 29 | Light Switch | DDRF1001 |
| 30 | Self Tapping Screw | DDGB845-85 |
| 31 | Pan Hd Screw M6 | DDGB818-86 |
| 32 | Lead | DD16102018A |
| 33 | Skt. Hd. Screw Cap M8 | 3044503 |
| 34 | Special Screw Set M10 | DD16102021 |
| 35 | Hex Nut. M10 | 3040602 |
| 36 | Quill Spring Seat | DD20104006 |
| 37 | Roll Pin 6x16 | DDGB879-86 |
| 38 | Quill Spring | DD20104008 |
| 49 | Spring Cap | DD20104007 |
| 40 | Hex Nut. M12 | 3040603 |
| 41 | Power cable | DD2002015C |
| 42 | Roll Pin 2.5 - 10 | DDGB879-86 |
| 43 | Head w/Pointer & Trim | DD20102001 |
| 44 | Connector Wire | DD16102019 |
| 45 | Pan Cr Screw M6 | 3040420 |
| 46 | Bulb Socket | DD16102013B |
| 47 | Allen Key M3 | DDGB5356-86A |
| 48 | Allen Key M4 | DDGB5356-86B |
| 49 | Allen Key M5 | DDGB5356-86C |
| 50 | Allen Key M6 | DDGB5356-86D |

HEAD ASSEMBLY

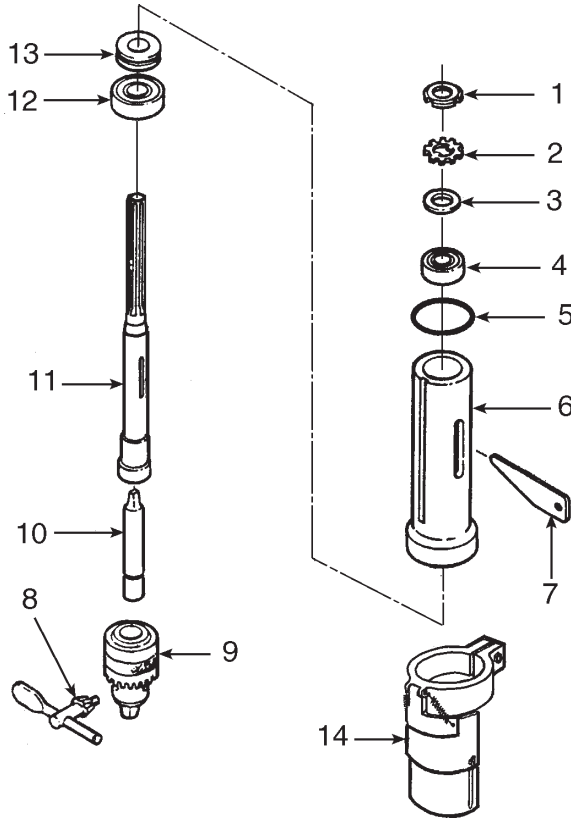


PULLEY COVER



| No. Description | Part No | No. Description | Part No. |
|--------------------------|-------------|-----------------------|------------|
| 1 "V" Belt A29 | DD16205011 | 13 Circlip | DD20104024 |
| 2 Ball Bearing 15mm | BRG60202 | 14 Ball Bearing 60206 | BRG60206 |
| 3 Idler Pulley | DD20105006 | 15 Bearing Spacer | DD20102023 |
| 4 Idler Pivot | DD20105007 | 16 Pulley Insert | DD20102022 |
| 5 Motor Pulley | DD20105005B | 17 Pulley Spindle | DD20105009 |
| 6 Skt Screw Set M8 | 3040528 | 18 Pulley Nut | DD20102025 |
| 7 Pan Hd. Screw M5 | 3040656 | 19 "V" Belt A33 | DD20105010 |
| 8 Cable Clamp | DD20102014 | 20 Knob | DD16105008 |
| 9 Rubber Bushing | DD20105012 | 21 Micro switch | DDXN5 |
| 10 Rd Hd. Washer Screw | 3040650 | 22 Micro sw. Cover | See dealer |
| 11 Foam Washer | DD13105009 | 23 Lead | DD20102029 |
| 12 Pulley Cover w/Labels | DD20105000 | | |

QUILL ASSEMBLY

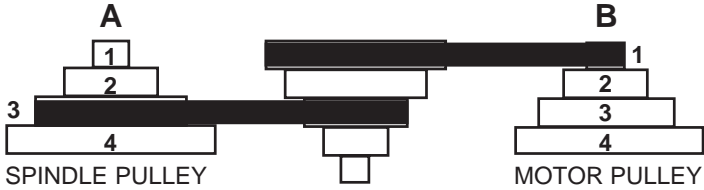


| No. | Description | Part No. | No. | Description | Part No. |
|-----|--------------------|------------|-----|--------------------|------------|
| 1 | Lock Nut M20 | DD20103005 | 8 | Chuck Key | DD20103010 |
| 2 | Lockwasher | DD20103004 | 9 | Chuck JT3 | DDJ2220 |
| 3 | Flat Washer | DD20103003 | 10 | Arbour MT3-JT3 | DD20128 |
| 4 | Ball Bearing 60204 | BRG60204 | 11 | Spindle | DD20103001 |
| 5 | O-Ring | DD20103006 | 12 | Ball Bearing 80206 | BRG80206 |
| 6 | Quill | DD20103002 | 13 | Thrust Washer | DDGB301-87 |
| 7 | Wedge Drift | DD16103008 | 14 | Chuck Guard | DD20108001 |

DRILL SPEED TABLE

The table below gives the belt arrangements for given drill speeds. The diagram shows the belts fitted to A3 and B1, giving a drill speed of 250RPM.

A full chart is also located on the inside of the pulley cover.



| | Spindle Pulley | Motor Pulley | Drill Speed | | Spindle Pulley | Motor Pulley | Drill Speed |
|---|----------------|--------------|-------------|----|----------------|--------------|-------------|
| | A | B | RPM | | A | B | RPM |
| 1 | 4 | 1 | 120 | 7 | 1 | 2 | 880 |
| 2 | 4 | 2 | 200 | 8 | 2 | 3 | 1180 |
| 3 | 3 | 1 | 250 | 9 | 3 | 4 | 1250 |
| 4 | 2 | 1 | 360 | 10 | 1 | 3 | 1720 |
| 5 | 3 | 2 | 400 | 11 | 2 | 4 | 1850 |
| 6 | 4 | 3 | 450 | 12 | 1 | 4 | 2700 |

SPARE PARTS AND SERVICING

Please contact your dealer, or CLARKE International, on the following numbers.

PARTS - 020 8558 6696 : SERVICE - 020 8556 4443

PARTS & SERVICE FAX - 020 8558 3622

or e-mail as follows:

PARTS: Parts@clarkeinternational.com

SERVICE: Service@clarkeinternational.com

CUTTING SPEEDS

Factors which determine the best speed to use in any drill press operation are:

1. Kind of material being worked.
2. Size of hole.
3. Type of drill.
4. Quality of cut desired.

Generally, the smaller the drill, the greater the required RPM. In soft material, the speed should be higher than for hard metals.

As a guide, the drill speed for a given drill bit size, is according to the table below.

| Speed Range (RPM) | | 2700 | 1720 - 1850 | 1180 - 1250 | 880 | 450 | 360 - 400 | 120 - 250 |
|--------------------------|----|------|-------------|-------------|-------|-------|-----------|-----------|
| Wood | in | 1/4 | 3/8 | 5/8 | - | - | - | - |
| | mm | 6.4 | 9.5 | 16 | - | - | - | - |
| Zinc Diecast | in | 3/16 | 1/4 | 3/8 | 1/2 | 5.8 | - | - |
| | mm | 4.8 | 6.4 | 9.5 | 12.5 | 16 | - | - |
| Alum & Brass | in | 1/8 | 3/16 | 3/8 | 1/2 | 11/16 | - | - |
| | mm | 3.2 | 4.8 | 9.5 | 12.5 | 17.5 | - | - |
| Plastic | in | 1/8 | 3/16 | 5/16 | 7/16 | 1/2 | 5/8 | - |
| | mm | 3.2 | 4.8 | 7.9 | 11 | 12.5 | 16 | - |
| Cast Iron & Bronze | in | 3/32 | 1/8 | 1/4 | 11/32 | 1/2 | 5/8 | - |
| | mm | 2.4 | 3.2 | 6.4 | 8.75 | 12.5 | 16 | - |
| Mild Steel & Malleable | in | 1/16 | 3.32 | 5/32 | 1/4 | 3/8 | 1/2 | - |
| | mm | 1.6 | 2.4 | 4 | 6.4 | 9.5 | 12.5 | - |
| Cast Steel & Med Carbon | in | 3/64 | 1/16 | 1/8 | 3/16 | 5/16 | 7/16 | 9/16 |
| | mm | 1.2 | 1.6 | 3.2 | 4.8 | 7.9 | 11 | 14.5 |
| Stainless and Tool Steel | in | 1/32 | 3/64 | 1/16 | 1/8 | 1/4 | 3/8 | 1/2 |
| | mm | 0.8 | 1.2 | 1.6 | 3.2 | 6.4 | 9.5 | 12.5 |

SPECIFICATIONS

| | |
|------------------------------------|---------------------|
| Motor | 230VC, 50Hz, 1 Ph |
| Power Rating | 980Watts |
| Current Rating | 4.3Amps |
| Speed | 1400RPM |
| No. of Drill Speeds | 12 |
| Speed Range | 120 - 2,700RPM |
| Fuse Rating | 13Amp |
| Light Bulb Type | E27- Screw - 60Watt |
| Chuck Size | 20mm |
| Spindle Taper | MT3 |
| Table Type | Square - Wet |
| Table Dimensions | 425x475mm |
| Table T- Slot Dimensions | 15x355mm x3 |
| Max. Spindle Travel | 120mm |
| Max. Dist. Chuck to Table | 706mm |
| Max. Dist. Chuck to Base | 1095mm |
| Column Dia. | 92mm |
| Quill Collar Dia. | 74mm |
| Dist. Column to Chuck Centre | 257mm |
| Overall Dimensions | 1680x575x850mm |
| Belt Type A | 1 x A33 - 838 |
| Belt Type B | 1 xA29 - 737 |
| Weight | 150kg |

OPTIONAL ACCESSORIES

**Drill Press Vices, from 3" to 6", Cross Vices (Cast Iron),
and Table Clamps
are available from your CLARKE dealer**