# TRAPANO A COLONNA / DRILL PRESS

Modello Fox F12-942 / F12-943 Fox model F12-942 / F12-943







# Drill press (FOX model F12-942 / F12-943) TABLE OF CONTENTS

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#### SAFETY INSTRUCTIONS

#### **CAUTION:**

Besides following the instructions mentioned in this manual, when using electric equipment you must always observe all safety precautions to prevent risk of fire, electric shock and personal injury.

Read this instruction manual before use and keep it carefully.

Working with an electric machine can be dangerous if you do not follow suitable safety measures. As for any electric machine with moving parts, the use of a tool entails some risks. If you use the machine as prescribed in this manual, you pay careful attention to the work you are doing, you observe the regulations and you use the suitable personal devices of protection, you can reduce the probability of risk. The possible remaining risks are related to:

- 1 direct or in direct contacts with electrical shock
- 2 injuries due to contact with moving parts
- 3 injuries due to contact with angular parts
- 4 injuries due to the ejection of tool parts or of the material you are processing
- 5 injuries due to noise

The probability of risk can be reduced by the machine safety equipment of the machines, as for example the protections, the blade case, the clamping, the stoppage and the personal protection devices as protective goggles, the dust mask, ear plugs, protective shoes and gloves. However, even the best protection devices cannot protect you from the risks due to lack of good sense and attention. Have always good sense and observe the necessary precautions. Carry out only the operations that you consider safe. DO NOT FORGET: everyone is responsible for his safety.

This tool has been designed for specific purposes. We recommend you not to modify it or use it for purposes different from the ones for which it has been manufactured. If you have any doubts regarding specific applications, do not use the machine before having contacted us and received our instructions.

#### READ AND KEEP THIS MANUAL

#### **GENERAL SAFETY INSTRUCTIONS**

- 1. **Keep the work surface clean.** If the work area or surface is busy the probability of injuries is higher.
- 2. **Do not use** the machine in dangerous environment conditions. In order to prevent electric shock, **do not expose the machine** to rain and do not use it in a damp area. Keep the work area illuminated. **Do not use the machine** near gas or inflammable substances.

- 3. **Connect** the dust collection device. If the machine is provided with a dust collection device, make sure that this system is connected and correctly used.
- 4. **Keep** unknown persons and children away from the machine. All unknown persons and children must keep a safe distance from the work area.
- 5. **Protect yourself** from electric shock. Avoid any contact with earthing surfaces.
- 6. **Handle** the power supply cable with care. **Do not pull** the electric cable to disconnect it from the plug. Keep the electric cable away from heat, oil and sharp edges.
- 7. **Use** extension cables designed for outdoor use. When using the machine outdoors, use only extension cables suitable for outdoor use, having specific indications.
- 8. **Be vigilant**. Check carefully what you are doing, have good sense. Do not use the machine if you are tired.
- 9. **Do not use** the machine if you are have taken medicines, alcohol, drugs.
- 10. **Avoid** accidental starts. Be sure that the switch is on the OFF position before inserting the plug into the socket.
- 11. **Wear appropriate clothing**. Do not wear loose-sleeved garments or pieces of jewllery which may get caught in the moving parts. For outdoor use we recommend non-slip shoes. Use headgear to cover hair if necessary.
- 12. **Use always personal protection devices:** wear protective goggles and masks in case dust or sawdust is produced. Wear ear muffs or plugs in noisy areas. Wear gloves when handling parts with sharp edges.
- 13. Keep your balance over the machine. Always keep stand firmly.
- 14. Ask for advices to expert and qualified people if you are not familiar with using such a machine.
- 15. **Remove** the tools you do not use from the workbench. If you do not use the tools, you must arrange them in a dry area which is locked and away from the reach of children.
- 16. **Do not force** the machine. You can obtain better and safer results if you use the machine at the rate for which it has been designed.
- 17. **Use** the suitable tool. **Do not use** a small tool for an intensive job. Fox example, do not use a circular saw to cut branches or stumps.
- 18. **Block** the piece. If possible, use C-clamps or a holder to fix the piece. It is safer than using only your hands.
- 19. **Keep** the tools in perfect conditions. Keep the tools sharp and clean to obtain better and safer results. Follow the instructions to grease and change the accessories. Check regularly the electric cable and change it if it is damaged. Keep the handles and the handgrips dry, clean, unoiled and ungreased.
- 20. **Disconnect** the tool from electricity if you do not use it, before maintenance and change of the accessories or tools such as blades, drills, mills, etc.
- 21. **Remove** locking and adjustment wrenches from the workbench. Get used to check if the locking and adjustment wrenches have been removed before starting it.
- 22. **Check** the parts of the tool to verify that there are not any damages. Before using the machine, check if the safety devices or any other parts are damaged in order to be sure that it works properly and that it can accomplish the tasks for which it has been designed. Check that the moving parts are aligned,

do not stop and are not broken. Check the assembly and any other condition that can influence the functioning of the machine. Any part or protection damaged must be repaired or changed from an authorized after sales centre. Do not use the machine if the switch does not work properly.

- 23. **Use** the machine, the tools and accessories in the way and for the purposes mentioned i this manual. Different uses and parts can cause possible risks for the operator.
- 24. **Get the machine repaired** by a qualified person. This electric tool is in compliance with local safety regulations. The machine must be repaired only by qualified people who use original spareparts, otherwise risks may arise for the operator.

### SPECIFIC SAFETY INSTRUCTIONS FOR DRILL PRESSES

- 1. **DO NOT** use the drill press until it is completely assembled and installed according to the instructions of this manual.
- 2. **FIX** the drill press on a supporting or flat surface. If the supporting or the flat surface move during use, **FIX** them to the ground.
- 3. **START** the drill press after removing all objects (tools, discards, etc..).
- 4. **DO NOT** start the drill press when the bit is in contact with the workpiece.
- 5. **ONLY USE** bits, tools or other accessories provided with a spindle connection pin smaller than 13mm.

- 6. **ALWAYS KEEP** your hands and fingers away from the bit or the tool.
- 7. **DO NOT TRY** to drill a workpiece which does not have a flat surface, unless you use a suitable horizontal base.
- 8. ALWAYS USE a locking device to prevent the workpiece from turning during working.
- 9. **USE** recommended speeds to drill the various materials according to the bit you are using.
- 10. **BE SURE** that all locking handles are locked before starting the machine and that the transparent protection of the spindle is in its position.
- 11. **DO NOT** carry out any assembly or preparation tasks on the workbench when the drill press is working.
- 12. **BE SURE** that the bit or the tool are not damaged and that they are properly blocked in the spindle before use.
- 13. **BE SURE** that the wrench of the spindle has been removed from the spindle before starting the machine. Only use the spindle wrench provided with the drill press.
  - 14. **ADJUST** workbench's height and bit's descent depth in order to prevent the bit from drilling the workbench.
  - 15. **ALWAYS** switch off the machine before removing the chips from the workbench.
  - 16. BE SURE that big workpieces are correctly supported at workbench's height during cutting.
- 17. **DISCONNECT THE MACHINE FROM THE POWER SUPPLY**, remove the bit or the tool before moving away from the machine.
- 18. **REPLACE** the missing or damaged parts. Do not use the drill if all its parts do not work.
- 20. **USE** the recommended drilling speed for the specific operation you are carrying out and for the material you are drilling. To do this, check the inside part of the pulley cover to see how to properly position the belt.

#### **ENVIRONMENT PROTECTION**

#### **INFORMATION FOR USERS**

In accordance with art. 13 of Legislative Decree 25th July 2005, no. 151 "Implementation of Directives 2002/95/EEC, 2002/96/EEC and 2003/108/EEC, relative to reducing the use of hazardous substances in electric and electronic appliances and the disposal of waste", please take note of the following:

- The crossed out wheelie bin symbol found on the appliance or the packaging indicates that the product must be disposed separately from ordinary household waste when it reaches the end of its working life.
- The user must consign the unwanted appliance to an authorised waste disposal centre for electric and electronic goods, or alternatively, hand it over to the relative dealer at the moment of purchasing a new appliance of the same type on a basis of a one to one ratio.
- Differentiated disposal to enable possible recycling or environmentally compatible elimination of the appliance, helps to limit undesirable effects on health and environment and promotes the reuse and/or recycling of the materials that compose the appliance.

#### **WARNING!**

In accordance with the relative legislation in force in the country of use, sanctions will be imposed on the user if the appliance is disposed of illegally.



#### SYMBOLS



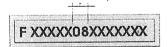
Read the instruction manual carefully

Use personal protection devices (goggles, dust mask earphones)









Serial number / year of production

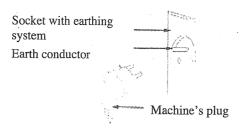
#### **ELECTRICAL CONNECTIONS**

#### **ELECTRICAL CONNECTIONS**

Use 230 V 50 Hz alternate voltage equipped with a earthing conductor to supply your machine. Ensure that the power supply corresponds to this voltage, that it is protected by a differential and magnetothermal switch, and that the earthing system is efficient. If your machine does not work when connected to a socket, check carefully the power supply features.

Use an extension cable in order to connect the machine to the power supply.

#### **EARTHING INSTRUCTIONS**



If the tool does not work properly or in case of short-circuit, the earthing system provides the current with a less resistance path and reduces the risk of electric shock. This tool has a plug to which a supply or extension cable must be connected, which in turn must be connected to a socket correctly installed and earthed, in conformity with local standards and regulations. Be sure that your earthing system is in good conditions and that your plug is protected by a differential and magnetothermal switch.

Do not modify the plug of the machine. If it does not enter the socket, get a suitable plug installed by a qualified person. If the earthing conductor is not correctly connected the risk of electric shock can occur. The conductor which has the green insulating jacket (with or without a yellow line) is the earthing conductor. If you must repair or change the supply cable, do not connect the earthing conductor to a low tension terminal.

Consult a qualified electrician or a person in charge of the maintenance if you have not understood or you have some doubts on the earthing instructions.

If the supply cable is damaged it must be changed by qualified people. Do not switch on the machine if the supply cable is damaged.

This tool is provided with a plug which must connected to a suitable socket.

#### **EXTENSION LEADS**

Only use three conductors extension leads, with a plug with two plugs and a earthing contact and sockets with two holes and a earth corresponding to the plug of the tool. When using an electric tool at a remarkable distance from the power supply, use an extension lead with sufficient dimensions to transport the current which the tool needs. If the extension cable has not the sufficient dimensions a voltage drop can occur, thus causing an overheating and a voltage loss. You can only use extension leads which are in compliance with CE standards.

Extension lead length: up to 15 m Cable dimensions: 3 x 2,5 mm<sup>2</sup>

Before using any kind of extension lead, check that it has not bare wires and that the insulation is not cut or worn. Repair and change immediately it if it is damaged or worn.



#### **WARNING:**

Extension cables must be arranged away from the working area in order that they do not get in contact with the workpieces, the tool or other parts of the machine, thus creating possible risks.



#### **WARNING:**

KEEP THE TOOLS AND THE EQUIPMENT AT A SAFE DISTANCE FROM CHILDREN

#### **RECOMMENDED USE**

This tool has been designed for drilling steel, metals, wood, plastics and all kind of materials in general, except for hardened steel, by using suitable bits and by selecting the suitable speed according to the material you are cutting and the tool you are using.

#### **TECHNICAL SPECIFICATIONS**

F12-942

F12-943

Motor power:

460 W S4 1-4 min

460 W S4 1-4 min

Speed:

180-2740 min-1

180-2740 min-1

Drill bit dimensions:

3 - 16 mm

3 - 16 mm

Max drilling capacity:

16 mm

16 mm

Chuck – column distance:

170 mm

170 mm

Chuck stroke:

80 mm

80 mm

Workbench dimensions:

255 x 255 mm

255 x 255 mm MT2

Morse cone: Height: MT2 1065 mm

1610 mm

Net weight: Gross weight: 46 kg 50 kg 51 kg 56 kg

#### **NOISE CONDITIONS**

The noise emitted, measured in conformity with the standards EN 3744 and EN 11201 is:

- Sound pressure level LpA = 67 dB(A)
- Sound power level LWA = 80 dB(A)
- Uncertainty of measurement K = 3 dB.

Noise levels are emission levels and do not necessarily indicate safe working conditions. Even if there is a connection between emission levels and exposure levels, the first ones cannot be used to determine safely if other precautions are necessary. The factors that can influence the actual exposure level of the operator include exposure length, environment features and other sources of noise, as for example the number of machines and operations present. Besides, exposure levels can change from country to country. However, these instructions enable the user of the machine to better evaluate the dangers and risks.

Drill press noise emission is very low and thus not dangerous for the user, however, if other tools are working or in case of noisy environment ear protection devices could be necessary.

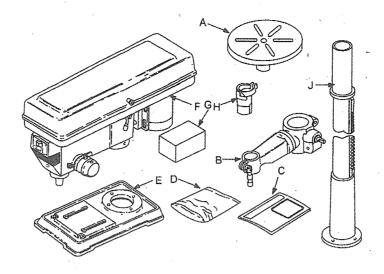
#### REMOVAL OF PACKAGE

Your drill press is delivered complete inside the package. Remove the package carefully and check that nothing is missing or damaged.

In case there are any faulty or damaged parts, do not use them in order not to compromise tool efficiency and safety. Address to an after sales centre to replace faulty parts.

To make the drill press work perfectly you have to assemble the various parts.

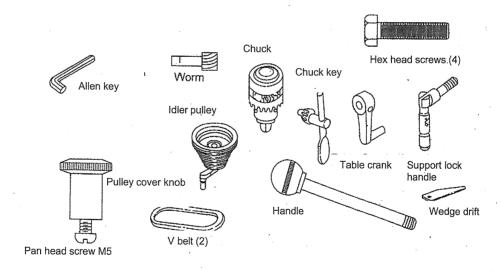
We recommend you to read carefully the assembly instructions and to follow them to the letter.



#### Drill press package includes:

- A) Table
- B) Arm
- C) Manual
- D) Bag with loose parts
- E) Base
- F) Head assembly
- G) Box of loose parts
- H) Chuck guard
- Olumn (long or short, it depends if it is model F12-942 or F12-943)

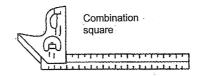
#### LOOSE PARTS IN BAG AND BOX



#### **DRILL PRESS ASSEMBLY**

WARNING: FOR YOUR OWN SAFETY, NEVER CONNECT PLUG TO POWER SOURCE OUTLET UNTIL ALL ASSEMBLY STEPS ARE COMPLETED.

#### **TOOLS NEEDED:**



Medium screwdriver

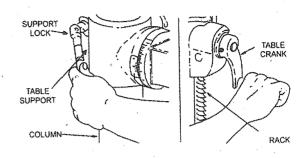
Adjustable wrench

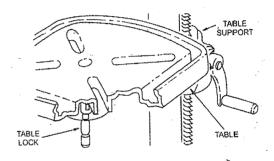


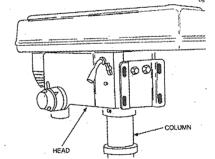
#### ASSEMBLY OF COLUMN AND TABLE HARDWARE

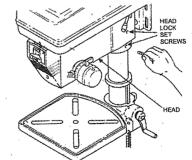
- 1. Position the base on the floor. Remove the protective cover.
- Remove the protective sleeve from the column 2. tube. Place the column assembly on the base, and align the holes in the column support with the holes in the base.
- Locate four D 10mm x 40 mm long bolts (see illustration) in loose parts bag.
- Install a bolt in each hole through the column support and the base and tighten with the adjustable wrench.
- Locate table crank and support lock in loose parts box.
- Install support lock from left side into the table 6. support and tighten by hand.
- Install table crank assembly and tighten set screw with a 3mm hex "L" wrench. Do not overtighten. Set screw should be tightened against the flat section of the shaft.
  - NOTE: To minimize crank backlash, tighten the support lock, rotate the elevation worm shaft clockwise, then assemble crank tight against table support and tighten set screw.
- Check column collar for proper adjustment. Collar should not be angled on the column and it should be positioned so that the rack can slide freely in the collar when the table is rotated 360° around column table. If re-adjusted, only tighten set screw enough to keep collar in place.

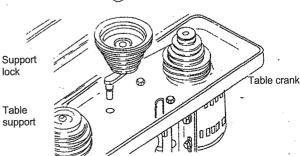
NOTE: To avoid column or collar damage, do not overtighten set screw.











Rack

#### INSTALLING THE TABLE

- 1. Loosen the support lock and raise the table support by turning the table crank clockwise until the support is at a working height level. Tighten support lock.
- 2. Remove the protective covering from the table.

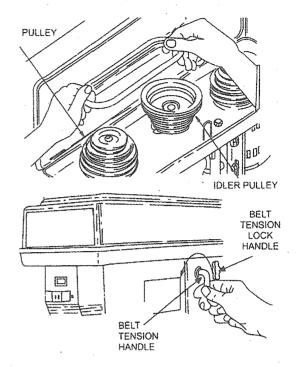
Place the table in the table support and tighten the table lock (located under the table) by hand. NOTE: If table won't fit into the table support easily, try to open the table support with a falt blade screw driver.

Table support

#### **INSTALLING THE HEAD**

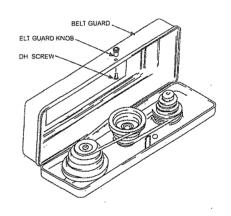
**CAUTION:** Head assembly weighs about 25 kg. Carefully lift head in two people.

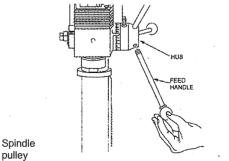
- Remove protective bag from head assembly. Carefully lift head above column tube and slide it onto column making sure that the head slides down over the column as far as possible. Align the head with the table and the base.
- 2. Locate two D 10 mm x 12 mm long set screws (see illustration) in loose parts bag.
- 3. Install a set screw in each hole (as indicated) on the right side of the head, and using a 5mm hex "L" wrench, tighten the two head lock set screws.

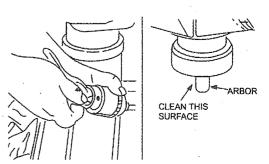


#### INSTALLING THE PULLEY CENTRE.

1. Locate centre pulley assembly in loose parts bag and place it the proper hole.







#### **INSTALLING BELT**

1. Locate two V-belts in the loose parts bag.

2. Use speed chart inside belt guard to choose speed for drilling operation. Install belts in correct position for desired speed. The longer one of the two belts is always positioned between the spindle pulley and the idler pulley.

3. Apply tension to the belt by turning belt tension

handle anti-clockwise until belt deflects approximately 1 cm by thumb pressure at its centre.

4. Tighten belt tension lock handle.

NOTE: Over tensioning belt could make the motor not to start or damage bearings.

5. If blet slips while drilling, readjust belt tension.

Belt tension lock handle

#### **INSTALLING BELT GUARD KNOB**

1. To attach belt guard knob, locate the knob and a D 5mm x 12mm long pan headed screw in loose parts bag. Install the screw in the hole located in the guard and attach the knob by turning it until it is tight.

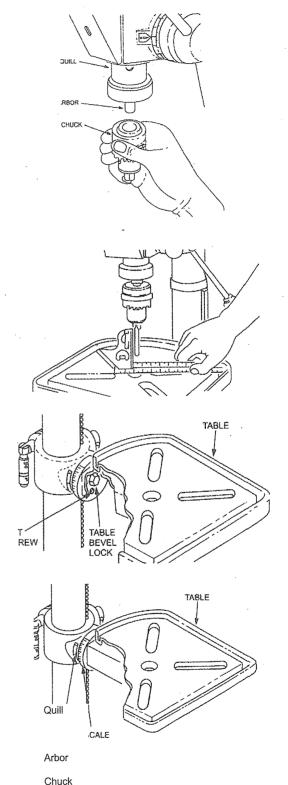
**CAUTION:** To avoid possible injury keep the guard in place and in proper working order while operating.



- 1. Locate three feed handles among loose parts.
- 2. Screw the feed handles into the threaded holes in the hub and tighten.

#### INSTALLING THE CHUCK

- Clean out the tapered hole in the chuck. Clean the tapered surface on the arbor with a clean cloth. Make sure there are no foreign particles sticking to the surfaces. The slightest piece of dirt on any of these surfaces will prevent the chuck from seating properly. This will cause the drill to "wobble".
- 2. Slide the chuck up over the arbor as illustrated.
- 3. Unlock support lock and raise table so ti is about 5 cm below tip of the chuck.
- 4. Turn the sleeve clockwise and open chuck's jaws completely.
- 5. Turn feed handles anti-clockwise and force chuck against the table until the chuck is secure.



ADJUSTING THE TABLE SQUARE TO HEAD

NOTE: Use a precise right angle square (not included)

Insert a straight ground stell ord or a straight drill bit (n chuck and tighten.

) approximately 8 cm long into the

2. With the table raised at a working height and locked on the table beside the rod.

ace the combination square flat on

- If an adjustment is necessary, loosen the set screw under bevel lock with 24mm flat wrench (included). These adjustments are located under the table.
- Align the table square to the bit by rotating the table until the square and the bit are in line.

Retighten the table bevel lock.

6. Retighten the set screw.

Set screw Table bevel lock

Vite di

Bloccaggio

Table

**BEVEL SCALE** 

fermo

inclinazione piano

NOTE: The bevel scale has been included to provide a quick method for beveling the table to aproximate angles. If precise accuracy is necessary, a square or another precision measuring tool should be used to position the table.

To use the bevel scale proceed as follows:

Loosen set screw and table bevel lock (see step 3 above). Pointer

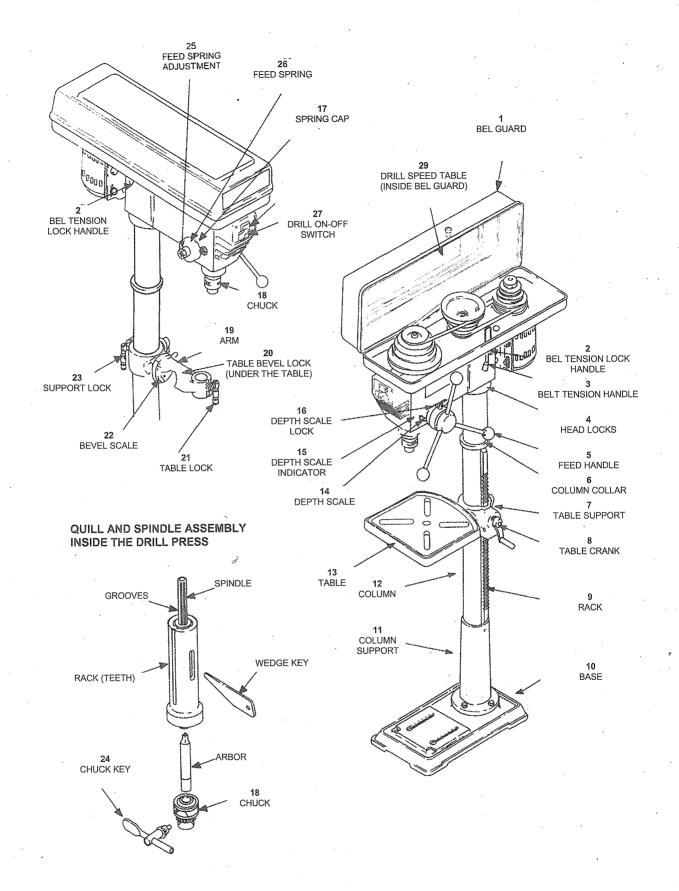
Move the table so that the desidered angle or bevel scale icorss from zero line on table support. Puntatore

Retighten table bevel lock and set screw.

Scala graduata

#### **DRILL PRESS DESCRIPTION**

FEED SPRING ADJUSTMENT



- 1. **BELT GUARD ASSEMBLY** Covers pulleys and belt during operation.
- 2. **BELT TENSION LOCK HANDLE** Tightens motor support and belt tenions handle to maintain correct belt distance and tension.
- 3. **BELT TENSION HANDLE** Turn handle anti-clockwise to apply tension to the belt, turn it clockwise to release belt tension.
- 4. **HEAD LOCKS** Lock the head to the column. Always have them locked in place during use.

- 5. **FEED HANDLE** It must be used to move the quill up and down. One or two may be removed if necessary whenever the workpiece is of such unusual shape that it interferes with the handles.
- 6. **COLUMN COLLAR** Holds the rack to the column. Rack remains movable in collar to permit table support movements.
- 7. TABLE SUPPORT Rides on column to support movements.
- 8. **TABLE CRANK** Turn it clockwise to elevate table. Support lock must be released before using crank.
- 9. RACK Combines with gear mechanism to provide easy elevation of table by hand operated table crank.
- 10. **BASE** Supports drill press. For additional stability, holes are provided in the base to bolt it to the floor.
- 11. COLUMN SUPPORT Support column, guides rack and provides mounting holes for column to base.
- 12. COLUMN Connects head, table and base on a one piece tube for easy alignement and movement.
- 13. TABLE Provides working surface to support workpiece.
- 14. **DEPTH SCALE** Shows depth of hole being drilled.
- 15. **DEPTH SCALE INDICATOR** Indicates drilling depth selected on depth scale.
- 16. **DEPTH SCALE LOCK** Locks the depth scale to selected depth.
- 17. SPRING CAP Provides means to adjust quill spring tension.
- 18. CHUCK Holds drill bit or other recommended accessories to perform desired operations.
- 19. ARM Extends beyond table support for mounting and alinging the table.
- 20. TABLE BEVEL LOCK Locks the table in any position from 0 to 45°.
- 21. TABLE LOCK Table can be rotated in various positions and locked.
- 22. **BEVEL SCALE** Shows the degree table is tilted for bevel operations. Scale is mounted on top of arm.
- 23. **SUPPORT LOCK** Tighten and locks table support to column. Always have it locked in place while operating with the drill press.
- 24. CHUCK KEY It is a self-ejecting chuck key which will pop out of the chuck when you let go of it. This action has been designed to prevent throwing of the chuck key from the chuck when power is turned « ON ». Do not use any other key as a substitute, order a new one if damaged or lost.
- 25. FEED SPRING ADJUSTMENT Refere to par. « Assembly of the belt ».
- 26. FEED SPRING Refere to par. « Assembly of the belt ».
- 27. **DRILL ON-OFF SWITCH** Has locking feature. This feature is intentended to prevent unauthorized and possible hazardous use by children and others.
- 29. **DRILLING SPEED CHART** Drilling speed can be changed by placing the belt in any of the grooves in the pulleys. See spindle speed label inside belt guard to approximately determine drilling speed.

#### DRILLING SPEED

Factors entailing better results with drill presses are the type of material, hole's size, type of bit or miller and cutting quality desired. The smaller the bit is, the faster the necessary speed must be. Speed must be higher when processing soft materials than hard metals. Use the recommended speed for the bit you are using and for the material to be cut

The chuck of this drill press can turn at 12 different speed levels: from 180 to 2740 RPM. You can obtain the lowest speed by placing the belt on the smaller step of motor's pulley and on the biggest of spindle's

#### STARTING THE DRILL PRESS

The switch is located on the front side of drill press' head. To start the machine, push the green button "I" of the switch (ON); to stop it, push the red button "O" of the switch (OFF).

The switch of this tool is an undervoltage switch that prevents the drill press from starting automatically in case of restart of the electric current after an interruption; then when an interruption of the electric current occurs the drill press stops and to make it restart you have to push the green button again.

#### USE

- 1. All ball bearings are packed with grease at the factory. They require no further Ibrication. Periodically lubricate the grooves in the spindle and the rack (head of the quill).
- 2. Insert the bit into the chuck far enogh to obtain maximum grip of chuck jaws. Make sure that the drill press is centered in the chuck. Tighten the bit sufficiently, so that it doesn't slip while drilling. Turn the chuck key clockwise to tighten, and anti-clockwise to loosen the drill bit.
- 3. Drilling depth may be controlled by using the pointer and the depth scale or by the two stop nuts on the feed stop rod.
- 4. to position the table, loosen support lock handle, move the table to the desired position and retighten support lock. To tilt the table, loosen the bevel lock, tilt the table to the desidered position on the bevel scale and retighten bevel lock.
- 5. After drilling a hole, release the feed handle to have the spindle sleeve return to its original position.

#### MAINTENANCE

**CAUTION**: Switch off the machine and disconnect it from the power supply by removing the plug from the socket before any adjustment, repair, maintenance task or when changing the blade.

In case you find out any damage to the protection devices or irregularities while processing or checking the machine, you must get it repaired immediately by qualified persons.

Before use check that the protection and safety devices are perfectly efficient. After carrying out the work, make a general cleaning of the machine by removing dust and chips.

Keep the chuck protection perfectly working.

Be sure that the axle of the spindle and the column are sliding by cleaning and oiling them periodically.

Clean the ventilation inlets of the engine.

Periodically check that the supply cable is not damaged.

Periodically check the tensioning of the belt.

#### TROUBLE SHOOTING

TROUBLE	PROBABLE CAUSE	REMEDY
Noisy operation	Incorrect belt tension     Dry spindle     Loose spindle pulley	<ul><li>. Adjust tension</li><li>. Lubricate spindle</li><li>. Check tightness of retaining nut on pulley</li></ul>
	. Loose motor pulley	. Tighten set screws in pulleys

Daill bit b	1.	•
Drill bit burns	. Incorrect speed	. Change speed
	. Chpis not coming out of hole	. Retract drill bit frequently to clear chips
	. Dull drill bit	. Resharpen drill bit
	Feeding too slow	. Feed fast enough – allow drill bit to cut
	. Not lubricated	. Lubricate drill bit with cutting or motor oil
Hole is not round	. Hard grain in wood or lengths of drill bit cutting lips and / or angles not equal	. Resharpen drill bit correctly
	. Bent drill bit	. Repalce drill bit
Wood splinters on underside	. No back up material under workpiece	. Use back up material
Woodpiece torn loose from hand	. Not supported or clamped properly	. Support workpiece or clamp it
Drill bit binds in workpiece	. Workpiece piching drill bit or excessive fee pressure	. Support workpiece or clamp it
	. Improper belt tension	. Adjust tension
Excessive drill bit	. Bent drill bit	. Use a straight drill bit
run out or wobble	. Worn spindle bearings	. Reaplace bearings
	Drill bit not properly installed in chuck	. Install drill bit properly
	. Chuck not properly installed	. Install chuck properly
Quill returns too slow or too fast	. Spring has improper tension	. Adjust spring tension
Chuck will not stay attached to spindle. It falls off when trying to install it	. Dirty, grease or oil on the tapered inside surface of chuck or on the spindles tapered surface	. Using a household detergent, clean the tapered surfaces of the chuck and spindle to remove all dirt, grease and oil

#### **AFTER-SALES SERVICE**

All the tools and accessories are made and checked by using the safest and most modern productive methods. However, if a tool gets damaged, it must be repaired by an authorized after sales centre. You can call the phone number 01592652946 or by sending a request to the e-mail address sales@serracon.co.uk.



SERRACON NEXUS HOUSE WHEATFIELD ROAD DUNNIKIER BUSINESS PARK KIRCALDY KY1 3PD ENGLAND

Robert Paterna

Tel: 01592652946 Fax: 01592654854

Declares that the: DRILL PRESS (F12-942 e F12-943) is in compliance with the regulations included in the Directives: CEE 2006/42-2004/108-2006/95

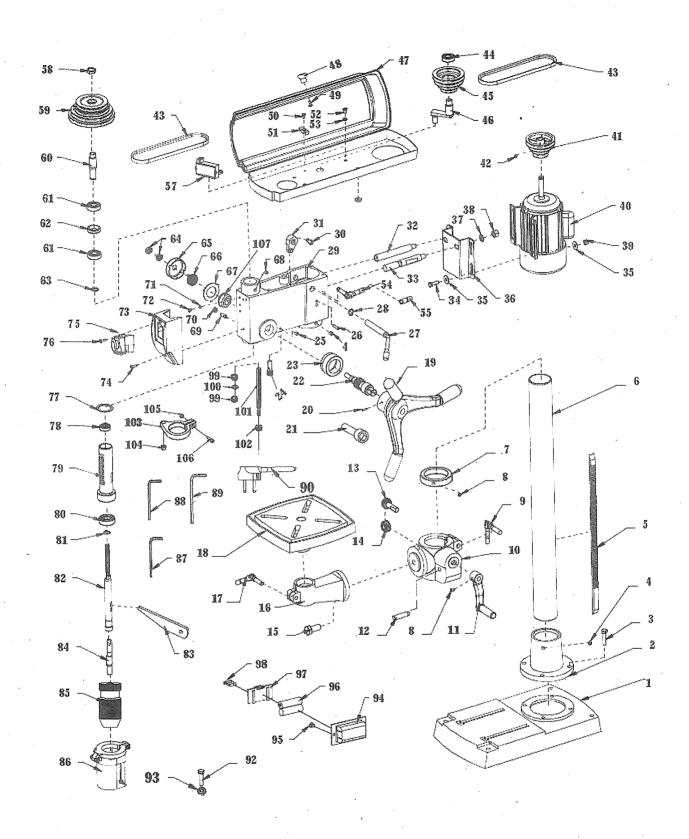
The Director

Robert Paterson

CE

04.05.2011

F12-942 e F12-943 TRAPANO A COLONNA / DRILL PRESS





## TRAPANO A COLONNA / DRILL PRESS

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### SCHEMA ELETTRICO / WIRING DIAGRAM

