OPERATION AND MAINTENANCE MANUAL

DRILL PRESS
Art. 0752

FERVI
PRO SMART EQUIPMENT

TRANSLATION OF THE ORIGINAL INSTRUCTIONS

PREFACE

Read this manual before any operation

ORIGINAL INSTRUCTIONS

Before starting any operation it is compulsory to read this instruction manual. The guarantee of smooth operation and full performance of the machine is highly dependent on the application of all the instructions contained in this manual.

Qualifications of the operator

The workers responsible for the use of this machine must have all the necessary information and instruction and should be given adequate training in relation to safety regarding:

a) The conditions of use of the equipment;
b) Foreseeable abnormal situations;

pursuant to art. 73 of Legislative Decree no. 81/08.

We guarantee the Machine's conformity to the specifications and technical instructions described in the Manual on the date of issuance, listed on this page. However, the machine may in the future be subject to technical changes that could be important, without the manual being updated.

Contact FERVI for information on any variations that may have been made.

REV. 1 **February 2013**

Table of contents

1. INTRODUCTION 4
1.1 Preface 6
2. GENERAL SAFETY WARNINGS 7
2.1 General Electric Power Tool Safety Standards 9
2.2 Technical Support 10
2.3 Other Provisions 10
3. TECHNICAL SPECIFICATIONS 11
4. ASSEMBLING THE MACHINE 12
4.1 Major Components 12
4.1.1 Installation of the Shaft and the Spindle 13
4.1.2 Installation of the Spindle Guard 13
5. MACHINE ELEMENTS 15
5.1 Identification Plates 15
5.2 Pittogrammi 16
6. SWITCHES AND CONTROL LEVERS 18
6.1 Control Buttons 18
6.2 Control Levers 19
7. OPERATION 21
8. ADJUSTING THE MACHINE 22
8.1 Adjusting the Table 22
8.2 Adjusting the Drilling Depth 22
8.3 Adjusting the Speed 22
9. MACHINE SAFETY 23
9.1 Grounding 23
9.2 SAFETY DEVICES 23
10. MAINTENANCE 25
10.1 Routine Maintenance 25
11. TROUBLESHOOTING 26
12. ELECTRICAL CIRCUIT 27
13. DISPOSAL OF PARTS AND MATERIALS 27
14. SPARE PARTS 28
15. DRILL PRESS ACCESSORIES 32

1. INTRODUCTION

This manual is considered an integral part of the machine to which it is attached at the time of purchase.

The purpose of this manual is to provide the knowledge necessary for the use and maintenance of the drill press machine, and create a sense of responsibility and an understanding of the capabilities and limitations of the means entrusted to the operator.

As the machine requires an operator, it is entrusted to experienced and skilled operators; therefore, the following machine must be perfectly known by its operator if it is to be used safely and effectively.

Operators must be properly trained and prepared, so make sure that this manual is read and consulted by the staff responsible for commissioning, operating and maintaining the **Drill Presses**. This is to make all operations the safest and most effective possible for those who carry out these tasks.

Therefore, it is imperative to strictly comply with the requirements in this manual, a necessary condition for safe and satisfactory operation of the machine.

Prior to the installation and use of the **Drill Presses**, authorized personnel shall:

- carefully read this technical document;
- know which protections and safety devices are available on the machines, their location and how they work.

It is the responsibility of the buyer to ensure that users are properly trained, they are aware of all the information and instructions in this document and that they are aware of the potential risks that exist while working with **Drill Presses**.

The manufacturer declines all responsibility for any damage to people and/or things caused by non-observance of the instructions in this manual.

The **Drill Presses** have been designed and built with mechanical guards and safety devices designed to protect the operator/user from possible injury. It is strictly forbidden to modify or remove guards, safety devices and caution labels. If this must be done (for example, for cleaning or repair), make sure that no one can use the machine.

Modifications to the machines carried out by the user must be considered their sole responsibility, therefore the manufacturer declines all responsibility for any damage caused to persons and/or property resulting from maintenance performed by unqualified personnel and in a manner different from the operating procedures shown below.

Graphic risk alerts, and safety and operational warnings

The following images were designed to attract the attention of the reader/user for correct and safe use of the machine:

Pay Attention

This highlights behavioral rules to keep order and prevent damage to the machine and/or the occurrence of dangerous situations.

Residual Risks

This highlights the presence of dangers that cause residual risks to which the operator must pay attention in order to avoid injury or damage to property.

1.1 Preface

To safely and easily use the machine, carefully read this manual in order to acquire the necessary knowledge. In other words, the life and performance of the machine are dependent on how it is used.

Even if the operator is already familiar with the drill press machine, it is necessary to follow the instructions contained herein, in addition to the general precautions to be observed while working.

- Acquire full knowledge of the machine.

Read this manual carefully to understand: operation, safety devices and all necessary precautions. All this is to allow safe use of the machine.

- Wear appropriate clothing for the job.

The operator must wear appropriate clothing. To prevent the occurrence of unpleasant accidents.

- Carefully maintain the machine.

Using the Machine

The machine must only be used by qualified personnel trained to use the machine by authorized personnel.

2. GENERAL SAFETY WARNINGS

Accident

- The operation of drilling or tapping always presents a risk of injury associated with the possibility of accidental contact of parts of the body with the tool in motion, detachment of splinters from the work piece, tool breakage, or ejection of a badly blocked piece.
- There is no "intrinsic" means of safety, just as there is no worker who, while careful, can "always" avoid an accident. Therefore, DO NOT underestimate the risks associated with using the machine and concentrate on the work in progress.

Risks related to Using the Machine

Although machines like this are not to be considered particularly dangerous, it is important not to underestimate the risks associated with the use of the machine and concentrate on the work that is taking place.

Risks related to Using the Machine

Despite the implementation of all safety devices, for safe use of the machine it is necessary to take note of all the requirements for the prevention of the accidents reported in various parts of this manual.

Risks related to Using the Machine

Every person who is responsible for the use and maintenance of the machine should have first read the instruction manual, particularly the chapter on safety information.
It is recommended that the plant safety manager get written confirmation of the above.

Operator Protection

Before starting any work on the machine, the operator must wear the appropriate personal protective equipment (PPE) such as gloves and eye protection (see section 6.6 of this manual).

Risks related to Using the Machine

- Work carried out in the electrical system of the machine must be carried out only by authorized personnel.
- One must know where the power supply lines are positioned, both internally and externally, and maintain a certain distance from them.
- If one hears unusual noises, or feels something strange, check and immediately repair.
- Do not modify the electrical system in any way. Any attempt in this regard may jeopardize the operation of precision devices that are electrically incorporated into the working machine, causing malfunction or accident.
- During all phases, proceed with great caution in order to avoid damage to persons, property or the machine itself.

Operator Qualifications

The workers responsible for using this machine must have all necessary information, education and receive adequate training regarding safety, including:
a. conditions of use for the equipment;
b. foreseeable, abnormal situations;
pursuant to art. 73 of Legislative Decree no. 81/08.

Read this manual carefully, and then work safely.

1. Always check the efficiency and integrity of the machine.
2. Before connecting the machine to the mains, make sure that the rotating parts are not damaged or badly worn. Make sure that the switch is in the neutral position.
3. Do not start the machine in an enclosed or poorly ventilated area, or in the presence of a flammable and/or explosive atmosphere. Do not use the machine in damp and/or wet locations, or those exposed to rain.
4. Avoid starting accidentally.
5. Before starting the machine, get used to ensuring that no remaining maintenance and service keys are inserted.
6. Keep the workplace tidy and free from obstruction; disorder causes accidents.
7. Make sure that the work environment is forbidden to children, non-employees and animals.
8. Do not perform tasks on the machine other than those for which it was designed. Only use the machine in the manner in which it was intended, as described in this instruction manual.
9. Work without disturbances.
10. Work only with good lighting.
11. Always wear eye protection and protective gloves while working. If dust is produced, use the appropriate masks.
12. Wear appropriate clothing. Loose clothing, dangling jewelry, long hair, etc.., can get caught in the spindle and moving parts, causing irreparable injury.
13. Firmly secure the work piece before starting the drill.
14. Always use the tool (tip or tap) in an appropriate manner. Perform only the work for which the tool is made. Do not use the tool for inadequate work.
15. Only use suitable resistance tools in relation to the work that is to be done. This is to avoid risky and unnecessary overloading for the operator, which may be harmful for the life of the tools themselves.
16. Do not pick up moving tools or other moving parts. To stop the spindle on the machine, always only use the stop command device.
17. Do not remove the shavings from the table with hands, even at a standstill. To do this, use tongs or a palette knife.
18. When the cutting tools need to be replaced or the speed needs to be changed, stop the motor and wait for the spindle to stop.
19. Do not leave the machine until the spindle and the tool have completely stopped.
20. After the work is completed, clean the tool and check its efficiency.
21. Replace worn and/or damaged parts, check that the repairs and protections work correctly before operating. Eventually, if necessary, have it checked by Service staff. Use only original spare parts.

22. **Cut the mains voltage supply of the machine when:**
    - not using the machine;
    - the machine is left unattended;
    - performed maintenance or registration does not work properly;
    - the tool is replaced;
    - moved or transported;
    - cleaning.
23. It is recommended that users of this publication, for maintenance and repair, have a basic knowledge of mechanical principles and procedures inherent in repair technique.
24. **Management responsible for safety is to establish that the staff responsible for using the machine has read and understood this manual in its entirety.**
25. **Management is responsible for safety and verification of the company's risk status according to Legislative Decree 81/08 and subsequent modifications and amendments.**

2.1 General Electric Power Tool Safety Standards

Risks related to Using the Machine

1. Do not modify the electrical system in any way. Any attempt in this regard may jeopardize the operation of electrical devices, causing malfunction or accident.
2. Work carried out in the electrical system of the machine must, therefore, be carried out only by qualified and authorized personnel.
3. If one hears unusual noises, or feels something strange, immediately stop the machine. Afterward, inspect the machine and repair if necessary.

1. Read this manual carefully, and then work safely.
2. Keep guards and protections in the correct position for safety.
3. Keep the workplace tidy; disorder causes accidents.
4. Do not perform tasks on the machine other than those for which it was designed.
5. Avoid starting accidentally.
6. Before starting the machine, get used to ensuring that no remaining maintenance keys are inserted.
7. **Unplug the power cord of the machine from the AC outlet when performing maintenance or adjustments**.
8. It is recommended that users of this publication, for maintenance and repair, have a basic knowledge of mechanical principles and procedures inherent in repair technique.
9. Work without disturbances.
10. Wear appropriate clothing. Loose clothing and jewelry can get caught in moving parts, causing irreparable injury.
11. Make sure that the work environment is forbidden to children and non-employees.
12. Replace worn or damaged parts; check that the repairs and protections work correctly before operating.
13. Do not lean on tools, accidental falls can cause injuries.
14. Do not pick up moving tools.
15. Do not leave the machine until the machine has completely stopped.

16. **Management responsible for safety is to establish that the staff responsible for using the machine has read and understood this manual in its entirety.**
17. **Management is responsible for safety and verification of the company's risk status according to Legislative Decree**

2.2 Technical Support

For any problems or concerns, please contact, without hesitation, the dealer from whom you purchased the machine, who has competent and specialized staff, specific equipment and spare parts.

2.3 Other Provisions

ALTERING SAFETY DEVICES IS PROHIBITED

The first thing to do when starting work is to check the presence and integrity of the protections and the operation of the safety devices.

If any defect is detected, do not use the drill press.

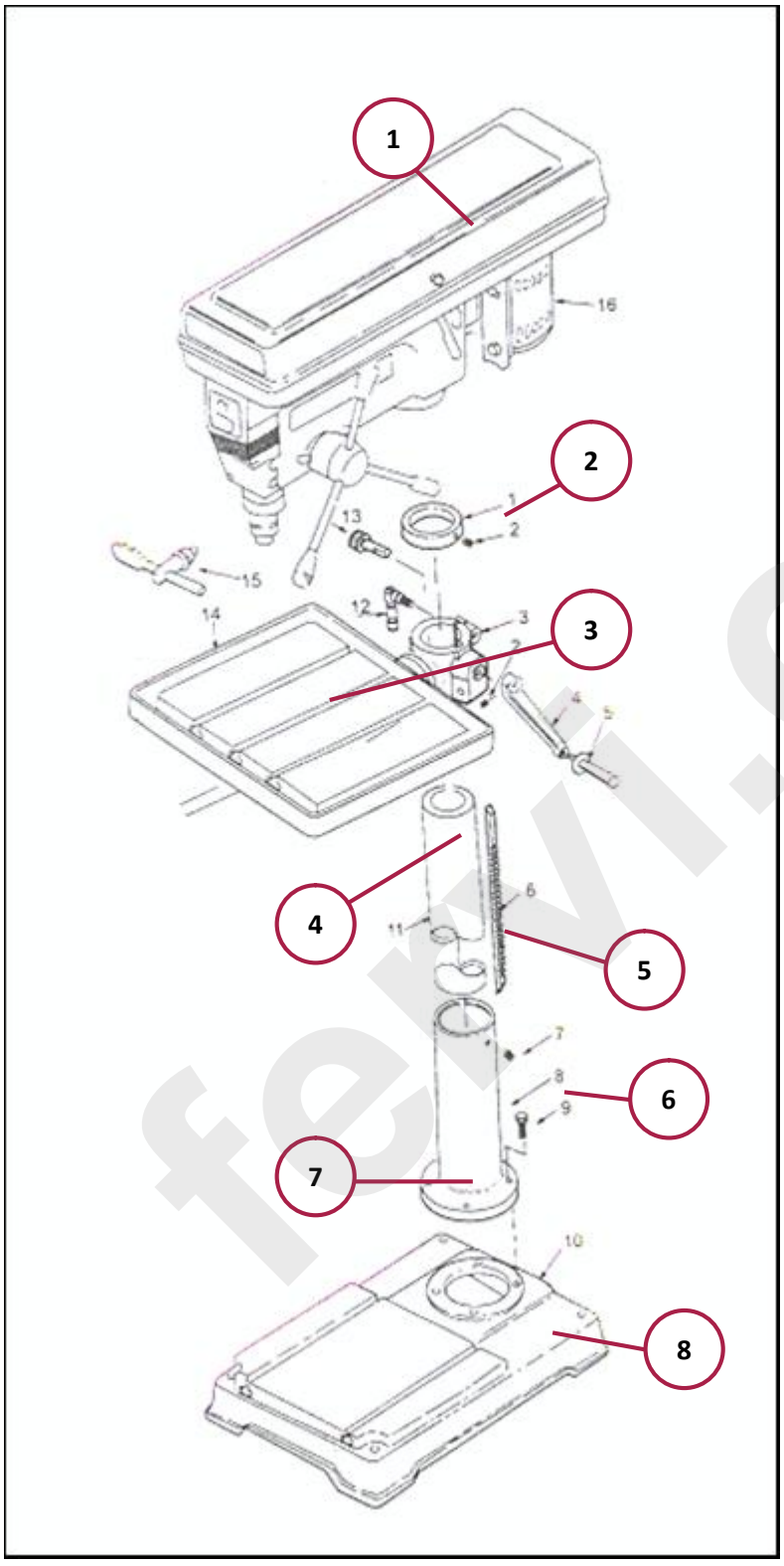
Even more so, it is strictly forbidden to modify or remove guards, safety devices, labels and identification plates.

3. TECHNICAL SPECIFICATIONS

Overall dimensions	Height (mm)	1630
	Width (mm)	300
	Depth (mm)	630
Mass	Net mass (kg)	66
	Gross mass (kg)	80
Nominal Values	Rated voltage (V/Hz)	230/50.
	Power (W)	750
General Characteristics	Spindle stroke (mm)	80
	Spindle travel distance (mm)	178
	Sleeve (mm)	∅ 47
	Spindle (mm)	∅ 16 B16 CM2
	Column (mm)	∅ 80
	Spindle-base distance (mm)	1170
	Speed (rpm)	180- 2740
	Acoustic emission (dB(A))	65

4. ASSEMBLING THE MACHINE

4.1 Major Components



1	Drive head
2	Connecting screw
3	(CC) Work table
4	(DD) Column
5	(EE) Rack
6	Connecting screw
7	(BB) Sub-base
8	(AA) Base

To assemble the Drill Press, follow these steps:

Staff Required

The assembly must be carried out by at least two people.

Clean the Machine

Before starting assembly, clean the protective product from the machine's components.

1. Attach the rack (EE) to the column (DD);
2. Place the Sub-base (BB) onto the Base (AA) and attach the two parts using the bolts;
3. Attach the work table (CC) to the Column (DD) and then onto the rack (EE), by turning the crank handle on the table;
4. Put the Column (DD) on the Sub-base (BB), and tighten the bolt;
5. Secure the Drive Head on the Column (DD) using the attaching screws.

Tighten the knobs on each feed handle and install them in the pinion shaft hub;

4.1.1 Installation of the Shaft and the Spindle

1. Carefully clean the taper of the drill and the spindle shaft;
2. Insert the spindle shaft. Push the handle down forward to push the shaft toward the inside;
3. Fully open the chuck jaws by turning the wrench counter-clockwise until it stops;
4. Put a piece of scrap wood on the table to protect the tip of the spindle;

Install the spindle firmly in the shaft.

4.1.2 Installation of the Spindle Guard

To assemble the protective plexiglass to the rod, proceed as shown in the following f :

- Attach the mounting brackets to the rod and tighten the screws *(Figure 1/A);*

Place the plexiglass shield in the slots of the brackets and tighten the locking screw *(Figure 1/B)*;

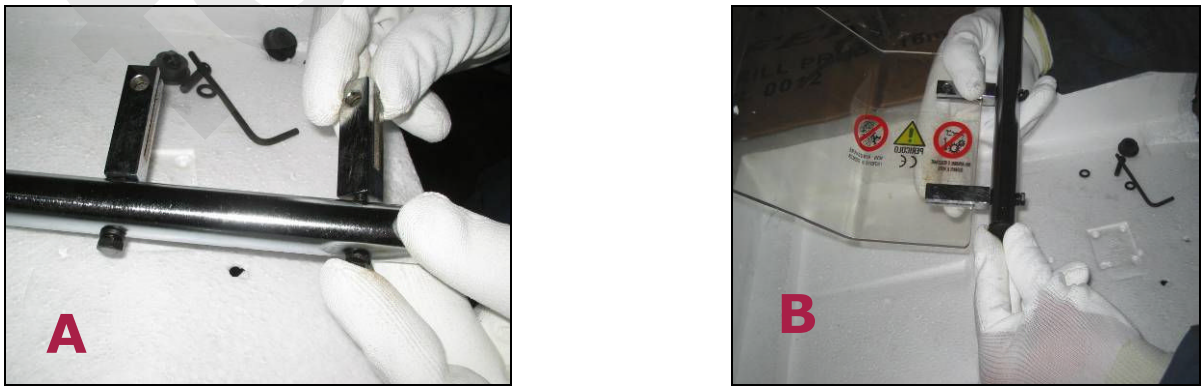


Figure 1 – Application of the brackets (A) – Insert the guard (B).

Assembling the Guard

The spindle guard must be mounted so that the stickers remain on the outside and are readable, so that they can be seen properly by the operator while using the machine.

- Place the rod inside the box containing the safety micro switch;
- Adjust the height and the opening direction so that the upper projection of the rod fits perfectly into the slot of the lid when the guard is closed.

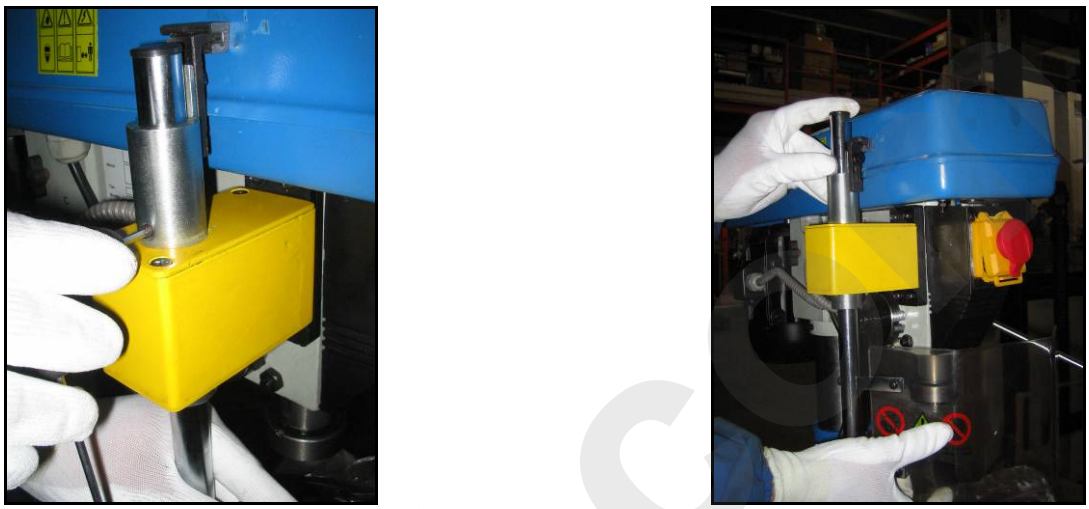


Figure 2 – Installation of the Rod Carrying the Guard.

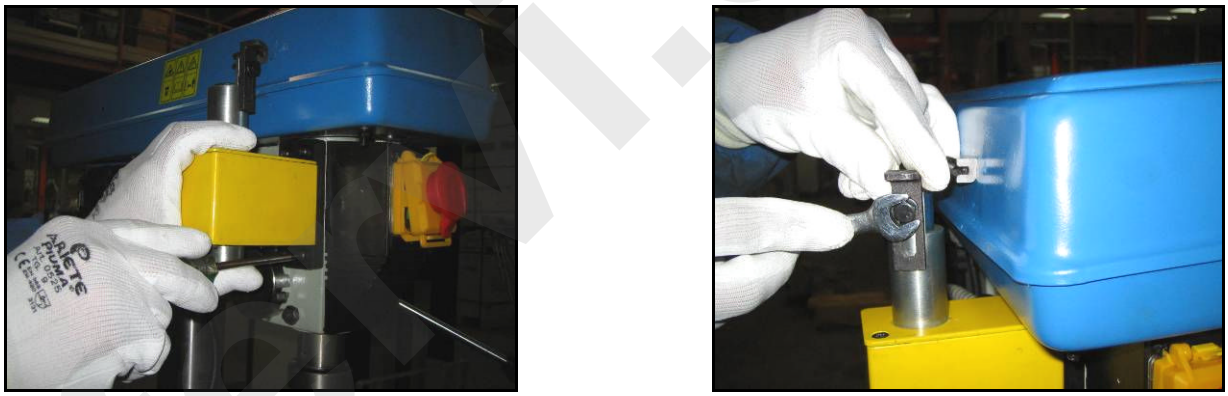


Figure 3 – Fitting and Adjusting the End of the Rod.

- Secure the support rod carrying the guard to the head of the drill;
- The mechanical stop has a fine adjustment to better position it inside the slot of the pulley housing.

5. MACHINE ELEMENTS

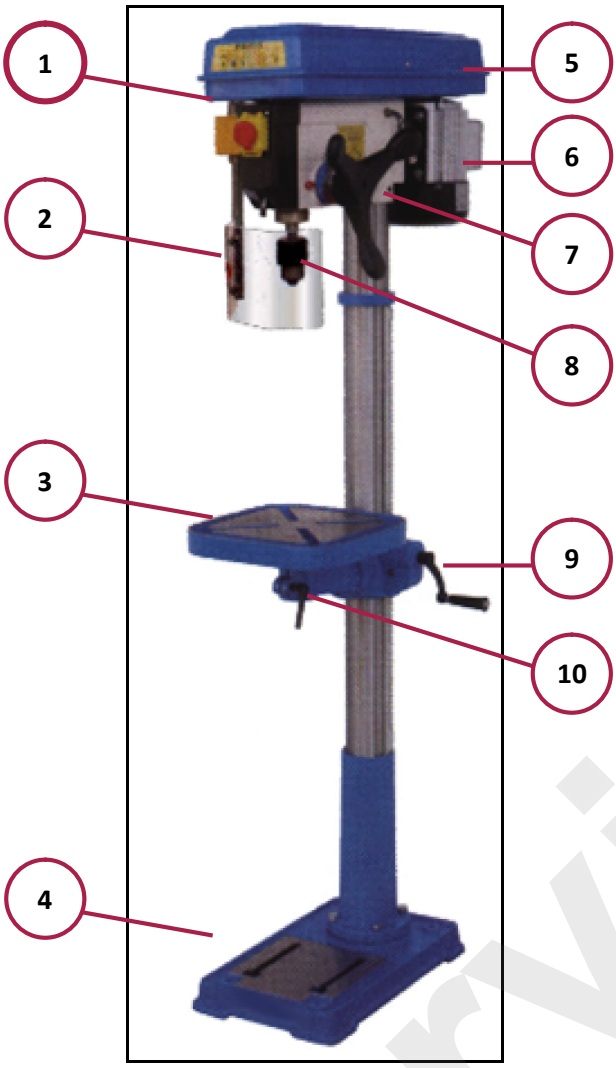


Figure 4 – Overview.

1	Controls
2	Spindle protector
3	Work table
4	Drill base
5	Protective cover for the timing belt
6	Electric motor
7	Hand wheel spindle
8	Spindle
9	Adjustable crank for table height
10	Adjustable lever for the vice

5.1 Identification Plates

The following Identification Plates are present on the Machine

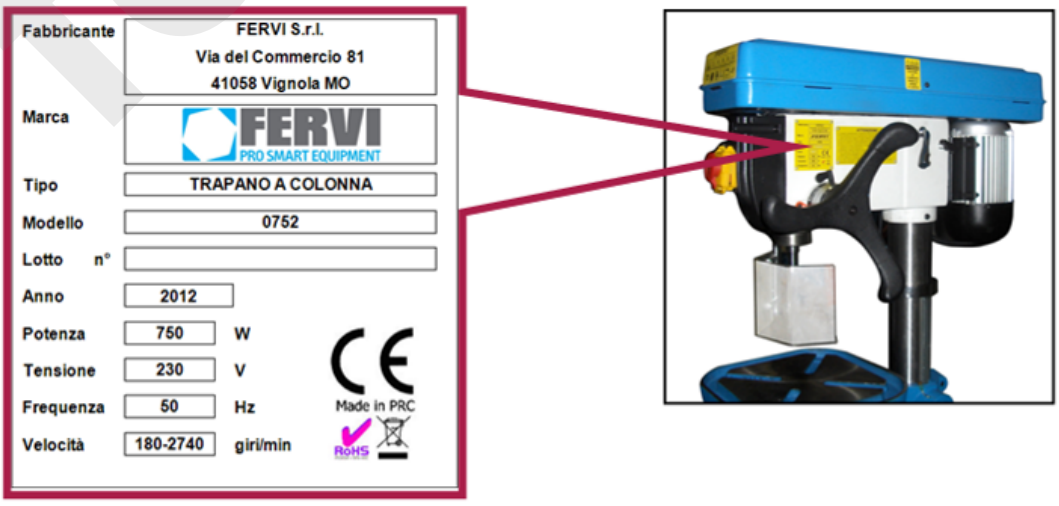
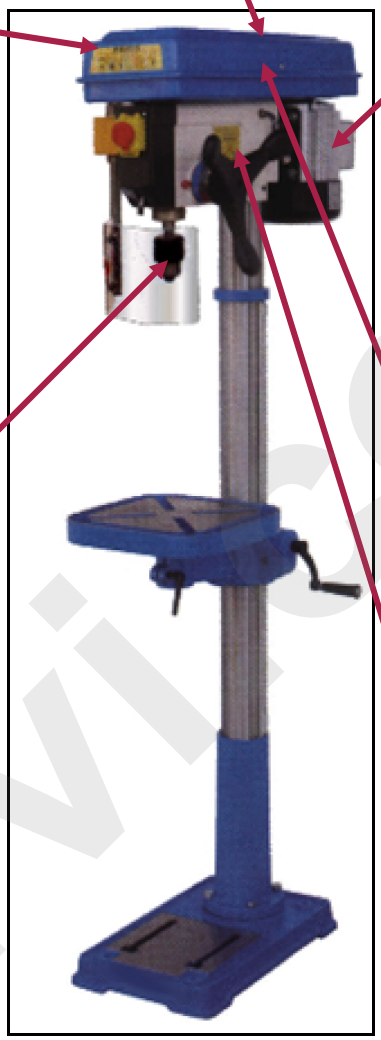


Figure 5 – Identification Plate.

5.2 Pittogrammi



ATTENZIONE

È VIETATO ESEGUIRE LAVORI SU APPARECCHIATURE ELETTRICHE SOTTO TENSIONE

- EVENTUALI DEROGHE DEVONO ESSERE AUTORIZZATE DAL CAPO RESPONSABILE
- IN CONDIZIONI DI PARTICOLARE PERICOLO DEVE ESSERE PRESENTE UN'ALTRA PERSONA OLTRE A CHI ESEGUE IL LAVORO

INIZIARE I LAVORI SOLO AD AVVENUTA ATTAZIONE DELLE MISURE DI SICUREZZA

In ottemperanza al Dgs.81/08 relativo alla prevenzioni infortuni

NON RIMUOVERE

I DISPOSITIVI DI SICUREZZA

ATTENZIONE!

TOGLIERE LA CORRENTE PRIMA DI APRIRE IL CARTER

È SEVERAMENTE VIETATA LA RIMOZIONE E LA OMISSIONE DOLORA

D.Lgs. 81/08

ATTENZIONE!!

- LEGGERE LE ISTRUZIONI PRIMA DI UTILIZZARE LA MACCHINA
- NON AVVICINARE LE MANI ALL'UTENSILE IN MOVIMENTO
- NON AFFERRARE IL PEZZO CON LE MANI PER ARRESTARLO
- NON REGOLARE LA MACCHINA MENTRE È IN FUNZIONE
- INDOSSARE SEMPRE IDONEE PROTEZIONI QUALI OCCHIALI E MASCHERINE QUALORA VENFA PRODOTTA POLVERE
- SCOLLEGARE LA MACCHINA DALL'ALIMENTAZIONE ELETTRICA IN CASO DI RIPARAZIONI O REGOLAZIONI
- NON INDOSSARE INDUMENTI SVOLAZZANTI, GIOIELLI,
- CATENINE E BRACCIALI CHE POSSONO AGGANCIARSI ALLA MACCHINA E CAUSARE DANNI IRREPARABILI
- SCOLLEGARE LA MACCHINA DALL'ALIMENTAZIONE ELETTRICA PRIMA DI ESEGUIRE MANUTENZIONE, REGOLAZIONI E RIPARAZIONI

Description

PLATE IN ITALIAN	PLATE IN ENGLISH
 **NON RIMUOVERE** **I DISPOSITIVI DI SICUREZZA**	 **DO NOT REMOVE** **SAFETY DEVICES**
È SEVERAMENTE VIETATA LA RIMOZIONE E LA OMISSIONE DOLORA **D.Lgs. 81/08**	**REMOVAL IS STRICTLY PROHIBITED DUE TO RISK OF HARM** **Legislative Decree 81/08**
 **ATTENTION**  **IT IS PROHIBITED TO WORK ON LIVE ELECTRICAL EQUIPMENT** • ANY EXCEPTIONS MUST BE APPROVED BY THE HEAD MANAGER • UNDER PARTICULARLY DANGEROUS CONDITIONS, ANOTHER PERSON MUST BE PRESENT WHO IS NOT PERFORMING THE WORK **ONLY BEGIN WORKING WHEN SAFETY MEASURES HAVE BEEN IMPLEMENTED** **In accordance with Legislative Decree 81/08 on accident prevention**	 **ATTENTION**  **IT IS PROHIBITED TO WORK ON LIVE ELECTRICAL EQUIPMENT** • ANY EXCEPTIONS MUST BE APPROVED BY THE HEAD MANAGER • UNDER PARTICULARLY DANGEROUS CONDITIONS, ANOTHER PERSON MUST BE PRESENT WHO IS NOT PERFORMING THE WORK **ONLY BEGIN WORKING WHEN SAFETY MEASURES HAVE BEEN IMPLEMENTED** **In accordance with Legislative Decree 81/08 on accident prevention**
 **ATTENZIONE!** **TOGLIERE LA CORRENTE PRIMA DI APRIRE IL CARTER**	 **ATTENTION!** **CUT THE POWER BEFORE OPENING THE CASING**
ATTENZIONE!! • LEGGERE LE ISTRUZIONI PRIMA DI UTILIZZARE LA MACCHINA • NON AVVICINARE LE MANI ALL'UTENSILE IN MOVIMENTO • NON AFFERRARE IL PEZZO CON LE MANI PER ARRESTARLO • NON REGOLARE LA MACCHINA MENTRE È IN FUNZIONE • INDOSSARE SEMPRE IDONEE PROTEZIONI QUALI OCCHIALI E MASCHERINE QUALORA VENFA PRODOTTA POLVERE • SCOLLEGARE LA MACCHINA DALL'ALIMENTAZIONE ELETTRICA IN CASO DI RIPARAZIONI O REGOLAZIONI • NON INDOSSARE INDUMENTI SVOLAZZANTI, GIOIELLI, • CATENINE E BRACCIALI CHE POSSONO AGGANCIARSI ALLA MACCHINA E CAUSARE DANNI IRREPARABILI • SCOLLEGARE LA MACCHINA DALL'ALIMENTAZIONE ELETTRICA PRIMA DI ESEGUIRE MANUTENZIONE, REGOLAZIONI E RIPARAZIONI	**ATTENTION!!** • READ THE INSTRUCTIONS BEFORE USING THE MACHINE • KEEP HANDS AWAY FROM MOVING PARTS • DO NOT GRASP THE PIECE WITH YOUR HANDS TO STOP IT • DO NOT ADJUST THE MACHINE WHILE IN OPERATION • ALWAYS WEAR SUITABLE PROTECTIVE GLASSES AND MASKS IN CASE OF ANY DUST • DISCONNECT THE MACHINE FROM THE POWER SUPPLY WHEN DOING REPAIRS OR ADJUSTMENTS • DO NOT WEAR LOOSE CLOTHING, JEWELRY, • CHAINS OR BRACELETS THAT CAN GET CAUGHT IN THE MACHINE AND CAUSE IRREVERSIBLE DAMAGE • DISCONNECT THE MACHINE FROM THE POWER SUPPLY BEFORE CARRYING OUT MAINTENANCE, ADJUSTMENTS AND REPAIRS

6. SWITCHES AND CONTROL LEVERS

6.1 Control Buttons

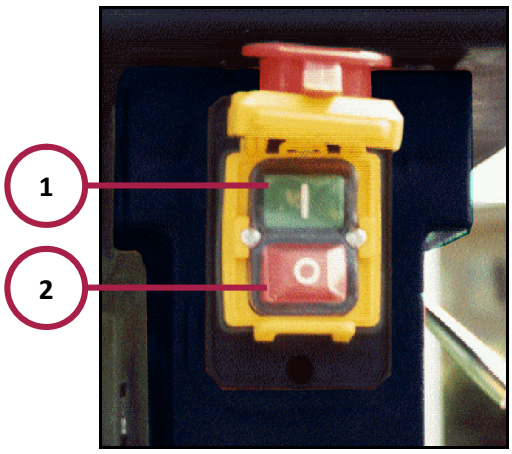


Figure 6 – Control Buttons

1	**Start Button**
2	**Stop Button**

Start Button

To start the machine and the rotating tip, press the button on the side.

Figure 7 – Start

Stop Button

To stop the machine and the rotating tip, press the button on the side.

Figure 8 – Stop

Emergency Button

Before starting work, always make sure that the red safety cap is always lowered. When pressure is applied, the stop button is pressed and the machine stops.

Press this button in case of emergency.

Figure 9 – Emergency

Checking the Emergency Button

Before starting any work on the machine, the operator must ensure that the emergency stop button functions.

In Case of an Emergency

In an emergency, press the red emergency button to stop the machine.

Danger of Injury

After pressing the emergency shut-down button, the spindle continues to rotate for a few seconds, wait until it is completely stopped before you place your hands near the work piece or the tool.

6.2 Control Levers

Crank 3 allows for the height adjustment of the table. To adjust see chapter 8.1.

Crank 4, if rotated in a clockwise direction, locks the table; if vice versa and the crank is rotated counterclockwise, the table is unlocked.

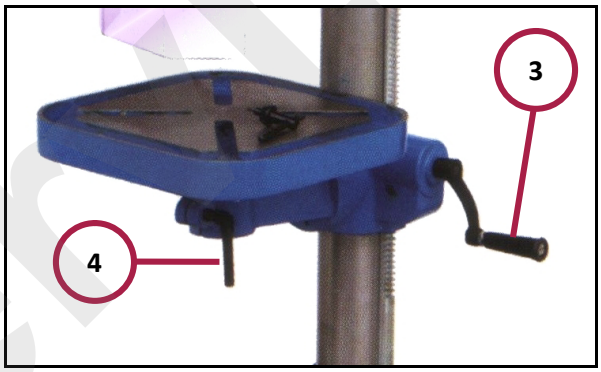


Figure 10 – Activating the Table

The hand-wheel allows for the vertical displacement of the spindle and, therefore, the advancement of the tool needed for the machine to work.

Figure 11 – Activating the Spindle

7. OPERATION

The drill press is a very easy machine to use. It functions by making holes in metal parts.

Using the Machine

The drill press should be used only with tools for processing holes (drill bits, countersinks and equivalents).

Risk of Crushing

Before using the machine, make sure that the base is fixed to the floor to prevent movement or loss of stability.

The machine is used as follows:

- Lift the work table to the desired height via the appropriate crank;
- The operating speed of the machine is changed via the transmission belt;
- Secure the work piece on the table;
- Press the green button (1) to turn on the machine and rotate the spindle;
- Lower the spindle with the wheel located on the right side of the drill;
- When done, lift the spindle with the wheel and then turn the machine off with the red button (2).

Danger of Injury

The work piece must be firmly fixed to the table (with the vise) while operating the machine. Never is the work piece to be held in place with one's hands.

Danger of Injury

After stopping the machine, the spindle continues to rotate for a few seconds, wait until it is completely stopped before you place your hands near the work piece or the tool.

8. ADJUSTING THE MACHINE

8.1 Adjusting the Table

Adjustment of the work table is only carried out vertically through the following operations:

- Loosen the lever under the table (4);
- Raise the table by moving the crank handle (3) up to the desired height;
- Tighten the knob positioned under the table (4).

8.2 Adjusting the Drilling Depth

To control the depth of drilling, it is necessary to lower the tip of the chuck assembly to the desired depth.

8.3 Adjusting the Speed

To adjust the speed of the machine, proceed as follows:

- Loosen the handle on the engine mounting.

Figure 12 – Handle

- Open the handle guard in order to unlock the protected pulley housing.

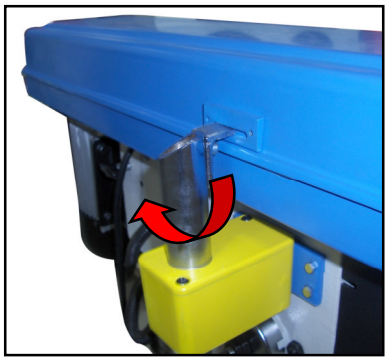


Figure 13 – Locked Pulley Housing

- Adjust the belt tension by pushing the motor backwards;
- Tighten the handle securely and close the protective cover;
- To restart the drill, it is necessary to close the spindle guard, which locks the protective cover on the pulley housing, and press the start button.

9. MACHINE SAFETY

9.1 Grounding

In case of malfunction or breakdown, grounding provides a path of least resistance for the electrical current that reduces the danger of electrical shock. The tool is equipped with a power cord with ground conductor and plug. The plug must be plugged into an appropriate outlet and installed on the ground according to the regulations.

Never change the plug provided for any reason. If it will not fit the outlet, entrust a qualified electrician to install the proper outlet.

Electric Shock

Incorrectly connecting the conductor to the tool's grounding system can cause the risk of electric shock.

If the electric cord or plug needs to be repaired or replaced, do not connect the conductor to tool's grounding system to a live terminal.

Connect the machine to a grounded electrical system and suitable device for the automatic disconnection of the power supply.

If you do not understand the instructions for grounding or if you doubt the exact grounding of the machine, check with a qualified electrician.

Repair or replace damaged or worn cords immediately.

Reconnection must take place in accordance with regulations.

9.2 SAFETY DEVICES

INTERLOCKING MOVEABLE GUARD

This device prevents contact between the operator and the moving spindle while the drill is operating.

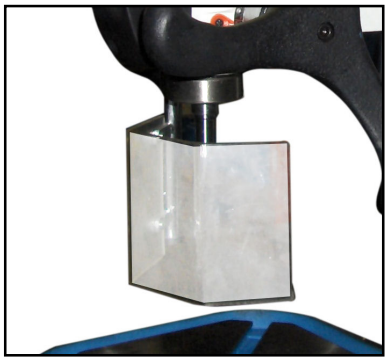


Figure 14 – Spindle Guard

PULLEY HOUSING LOCK

This device locks the opening of the pulley housing so that the spindle guard stays closed and it is possible to start the drill. Opening the housing is done via the safety micro switch, which stops power to the Drill's motor.

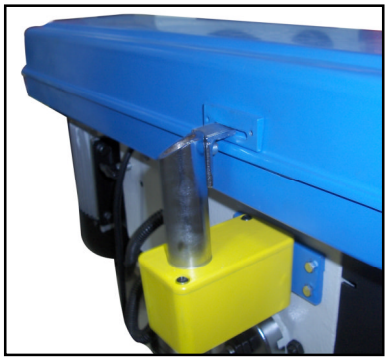


Figure 15 – Locking the Pulley Housing

Checking the Safety Devices

Each time the Drill is used, check that the devices function well; if they do not function, do not use the machine.

Danger of Injury

After opening the guard, the spindle continues to rotate for a few seconds, wait until it is completely stopped before placing hands near the work piece or the tool.

10. MAINTENANCE

10.1 Routine Maintenance

With a compressor, routinely blow away the dust that accumulates inside the motor and the pieces of metal remaining on the table and on the tip.

Worn Power Cord

Each time the Drill is used, check that the devices function well; if they do not function, do not use the machine.

Every 50 hours, or every 5 days, lubricate the gear mechanism, the rack that lifts the table and the grooves of the spindle with oil.

Every 300 hours or every 6 months during the life of the machine, a thorough check of operation, and wear and tear on the machine is to be carried out by a qualified technician. Lubricate bearings 3 and 4 with oil.

Every 600 hours or every year during the life of the machine, lubricate bearings 1-2 by removing the pulley.

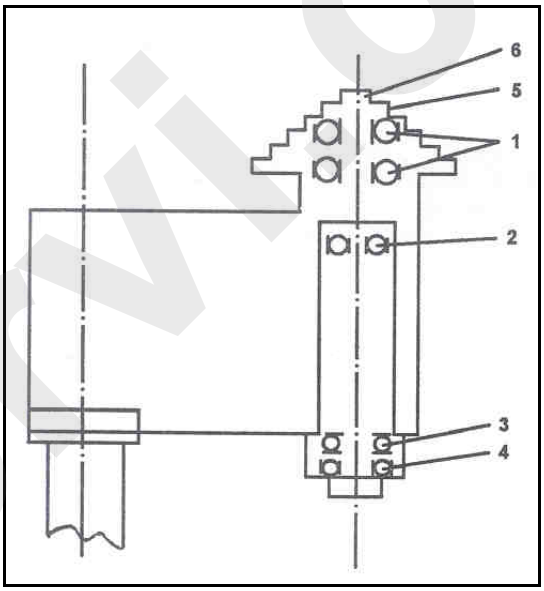


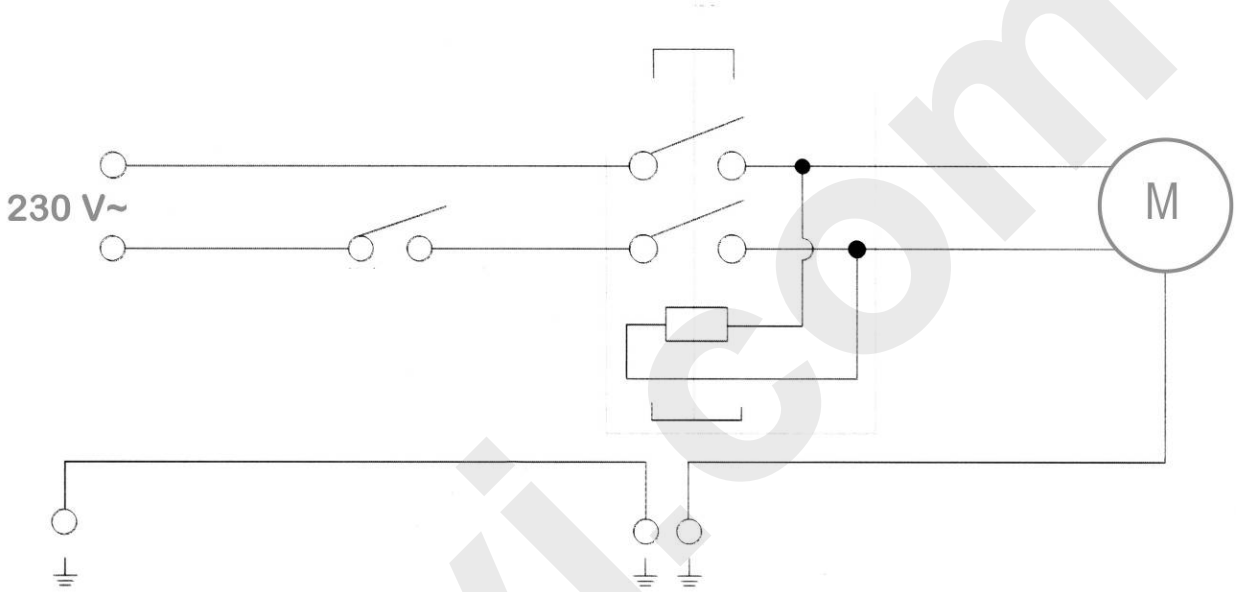
Figure 16 – Spindle Bearings

11. TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTION
Noisy operation.	A) Incorrect belt tension. B) Dry spindle. C) Loose pulley. D) Loose belt. E) Broken bearing.	A) Adjust the tension. B) Remove the spindle sleeve and lubricate. C) Tighten the pulley. D) Adjust the belt tension. E) Replace the bearing.
Excessive wobbling of the spindle.	A) Loose spindle. B) Worn spindle shaft or bearings. C) Broken spindle.	A) Tighten the spindle shaft. B) Replace the spindle shaft or bearings. C) Replace the spindle.
The motor will not start.	A) Electrical power supply. B) Motor connection. C) Switch connections. D) Burnt motor windings. E) Broken switch.	A) Check the mains power supply. B) Check the motor connection. C) Check the switch connections. D) Replace the motor. E) Replace the switch.
The tip is jammed in the work piece.	A) Excessive forward pressure on the handle. B) Loose belt. C) Loose tip. D) Speed is too fast.	A) Apply less pressure. B) Check the belt tension. C) Tighten the tip. D) Change the speed.
The tip is burning or smoking.	A) Incorrect speed. Revolutions per minute. B) Shavings will not discharge. C) Tip is worn or does not cut the material well. D) Needs lubrication. E) Incorrect feeding pressure.	A) See table speed. B) Clean the tip. C) Check the sharpness and taper. D) Lubricate while drilling. E) Apply less pressure.
Raising the table is difficult.	A) Needs lubrication. B) Bent rack. C) The table is clamped into position.	A) Lubricate with light oil. B) Straighten the rack. C) Loosen the clamp.
The tip vibrates, the hole is not round.	A) Knot in the wood, the tip was sharpened off-center. B) Wrong tip.	A) Sharpen the tip correctly. B) Replace the tip.

Spindle will not stick to the sleeve.	A) Dirt, grease or oil in the morse taper. B) Running in an unauthorized mode.	A) Use detergents (alcohol, etc.) to clean the conical part of the drill and the spindle. B) Drilling causes the failure.

12. ELECTRICAL CIRCUIT



13. DISPOSAL OF PARTS AND MATERIALS

If the machine is to be scrapped, its parts must be dispose of in a different way.

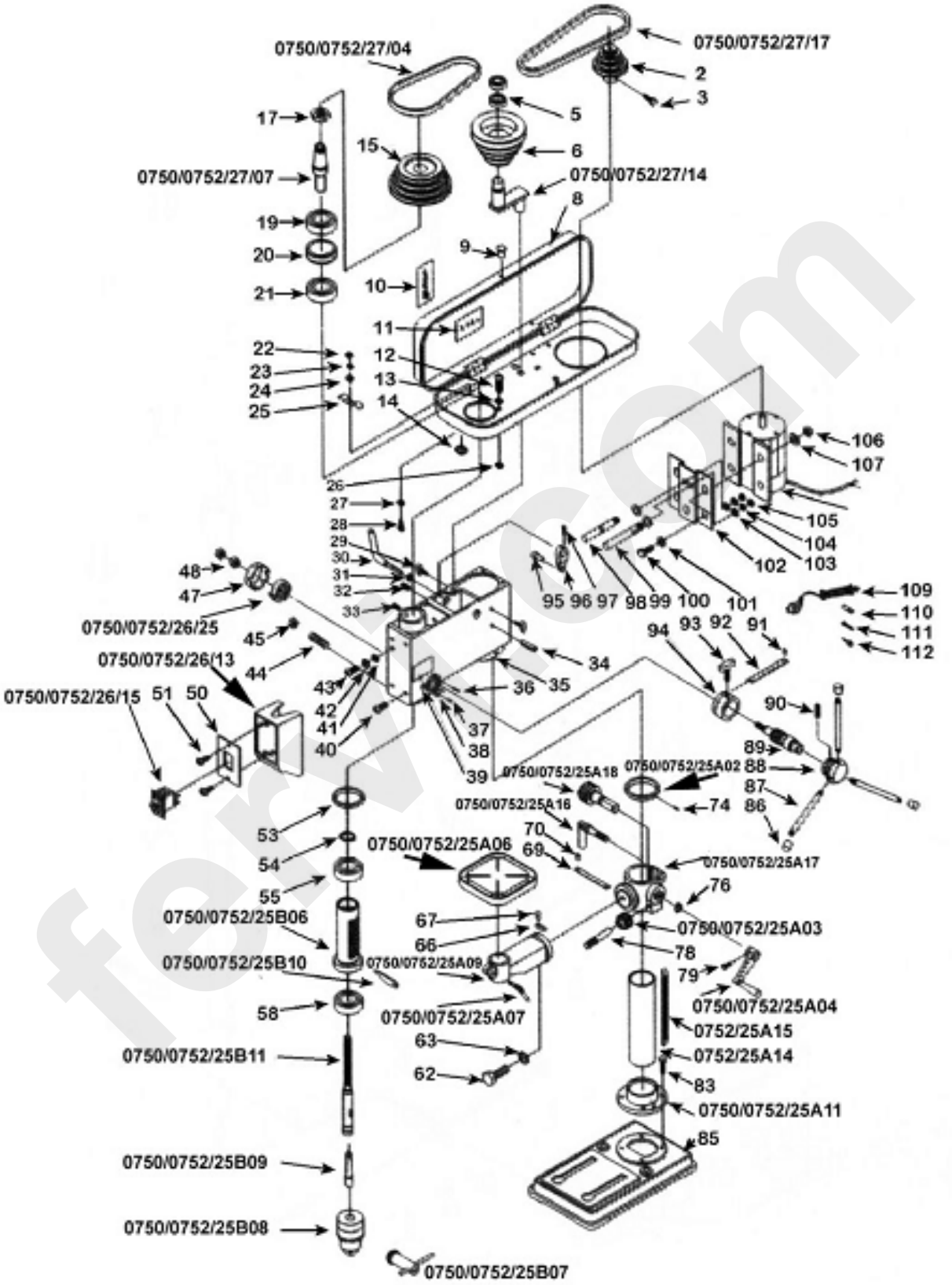
The Drill Press is composed of the following materials:

- the head, column, table and base are made of cast iron;
- gears, shafts, bearings, slideways and spindle are made of steel;
- the guard and cable sheaths are made of polymeric material.

Respect the Environment!

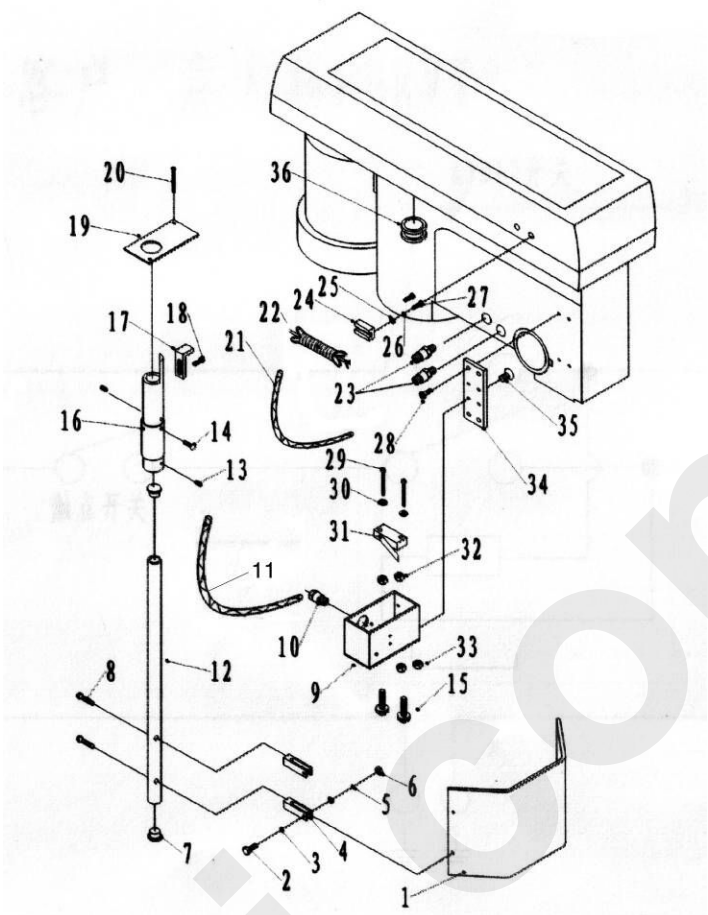
Contact a specialist center for the collection of materials.

14. SPARE PARTS



Ref.	Description	Ref.	Description
0750/0752/27/17	Belt	0750/0752/036	Linchpin
0750/0752/002	Small pulley	0750/0752/037	Rivet
0750/0752/003	Bolt	0750/0752/038	Switch
0750/0752/005	Bearing	0750/0752/039	Warning label
0750/0752/006	Pulley	0750/0752/040	Bolt
0750/0752/27/14	Shaft	0750/0752/041	Washer
0750/0752/008	Pulley housing	0750/0752/042	Locking washer
0750/0752/009	Rivet	0750/0752/043	Bolt
0750/0752/010	Label	0750/0752/044	Bolt
0750/0752/011	Speed label	0750/0752/045	Nut
0750/0752/012	Bolt	0750/0752/26/25	Spring
0750/0752/013	Flat washer	0750/0752/047	Spring seat
0750/0752/014	Rubber grommet	0750/0752/048	Nut
0750/0752/015	Shaft pulley	0750/0752/26/13	Switch box
0750/0752/27/04	Belt	0750/0752/050	Plate
0750/0752/017	Nut	0750/0752/051	Bolt
0750/0752/27/07	Shaft	0750/0752/26/15	Switch
0750/0752/019	Bearing	0750/0752/053	O-ring
0750/0752/020	O-ring	0750/0752/054	Retainer ring
0750/0752/021	Bearing	0750/0752/055	Bearing
0750/0752/022	Nut	0750/0752/036	Shaft seat
0750/0752/023	Locking washer	0750/0752/25B10	Wedge extractor
0750/0752/024	Flat washer	0750/0752/058	Bearing
0750/0752/025	Mounting plate	0750/0752/25B11	Shaft
0750/0752/026	Washer	0750/0752/036	Shaft
0750/0752/027	Flat washer	0750/0752/25B08	Spindle
0750/0752/028	Bolt	0750/0752/062	Bolt
0750/0752/029	Bolt	0750/0752/063	Locking washer
0750/0752/030	Lifting lever	0750/0752/25A07	Column clamping lever
0750/0752/031	Retainer ring	0750/0752/25A07	Column clamping vise
0750/0752/032	Bolt	0750/0752/066	Label
0750/0752/033	Bolt	0750/0752/067	Rivet
0750/0752/034	Linchpin	0750/0752/25A07	Table
0750/0752/035	Cylinder head	0750/0752/069	Graduated scale incline

Ref.	Description	Ref.	Description
0750/0752/070	Rivet	0750/0752/092	Graduated scale depth
0750/0752/25A07	Table lever lock	0750/0752/093	Bolt
0750/0752/25A07	Worm	0750/0752/094	End feed separator
0750/0752/25A07	O-ring	0750/0752/095	Lever plate
0750/0752/074	Bearing	0750/0752/096	Lifting lever
0750/0752/25A07	Table support	0750/0752/097	Bolt
0750/0752/076	Retainer ring	0750/0752/098	Adjustment lever
0750/0752/25A03	Pinion	0750/0752/099	Rod
0750/0752/078	Shaft	0750/0752/100	Bolt
0750/0752/079	Bolt	0750/0752/101	Flat washer
0750/0752/25A04	Table raising lever	0750/0752/102	Engine mounting plate
0752/25A15	Rack	0750/0752/103	Flat washer
0752/25A14	Column	0750/0752/104	Locking washer
0750/0752/083	Bolt	0750/0752/105	Nut
0750/0752/25A11	Flange	0750/0752/106	Nut
0750/0752/085	Base	0750/0752/107	Flat washer
0750/0752/086	Knob	0750/0752/26/43	Motor
0750/0752/087	Moving spindle lever	0750/0752/109	Electrical cable
0750/0752/088	Lever seat	0750/0752/110	Insulation jacket
0750/0752/089	Shaft	0750/0752/111	Clamp
0750/0752/090	Linchpin	0750/0752/112	Clamp
0750/0752/091	Rivet		



Ref.	Description	Ref.	Description
0750/0752/A01	Spindle guard	0750/0752/A26	Locking washer
0750/0752/A02	Bolt	0750/0752/A34	Mounting plate
0750/0752/A03	Washer	0750/0752/A35	Screw
0750/0752/A04	Clamp guard	0750/0752/A36	Grommet
0750/0752/A05	Washer	0750/0752/SMCA	TOTAL
0750/0752/A06	Nut		
0750/0752/A07	Cap		
0750/0752/A08	Bolt		
0750/0752/A12	Guard rod		
0750/0752/A21	Motor power supply cable		
0750/0752/A22	Power supply cable		
0750/0752/A23	Grommet		
0750/0752/A24	Fixed casing seat		
0750/0752/A25	Flat washer		

15. DRILL PRESS ACCESSORIES

	ACCESSORIES (in a separate box)	PARTS/GROUPS
1	Chuck key (see figure below)	1 Group
2	Wedge shaft	1 Group
3	Supply knobs	3 Parts
4	Regulator for support table height	1 Group
5	Table support mounting bolt	1 Part
6	Table arm mounting bolt	1 Part
7	Upper pulley cover knob and screw	1 Group
8	Flange screws and washers	1 Group
9	Allen wrenches	1 Group

Figure 17 – Chuck key