USER'S MANUAL

Ferm Table drilling machine

FTB-16/500

CE

Ferm®

Art.nr. 733505
Screwfix nr. 34370

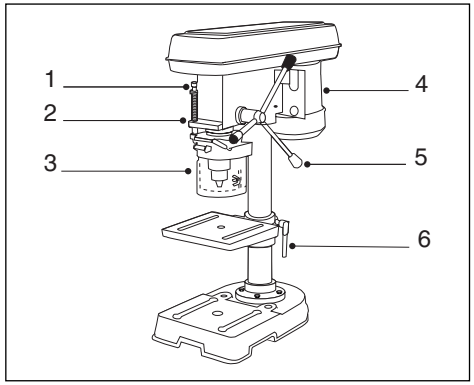


Fig.A

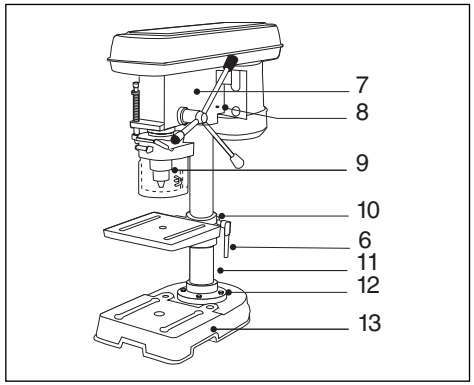


Fig.B

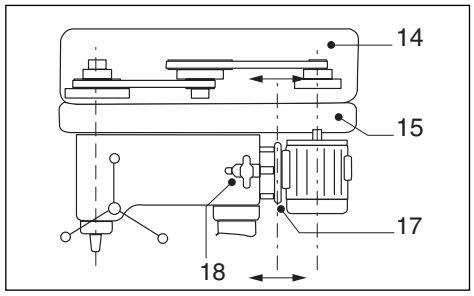


Fig.C

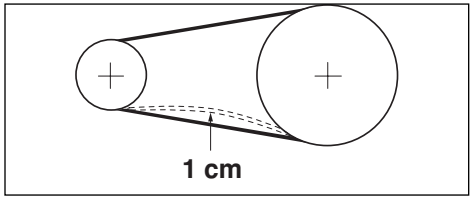


Fig.D

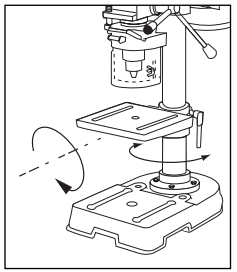


Fig.F

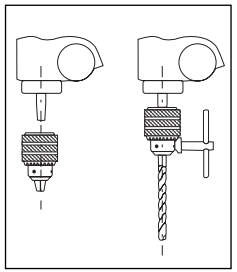


Fig.G

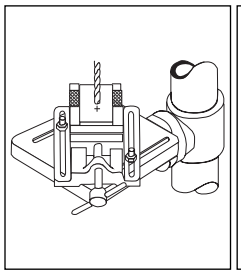


Fig.H

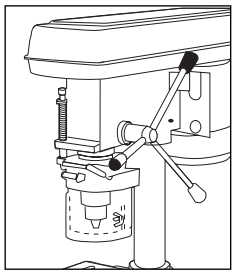


Fig.I

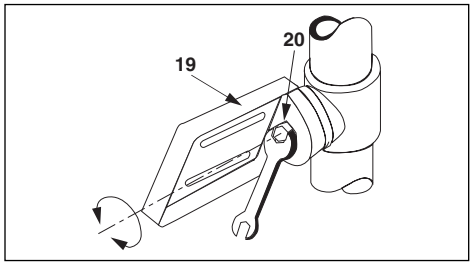
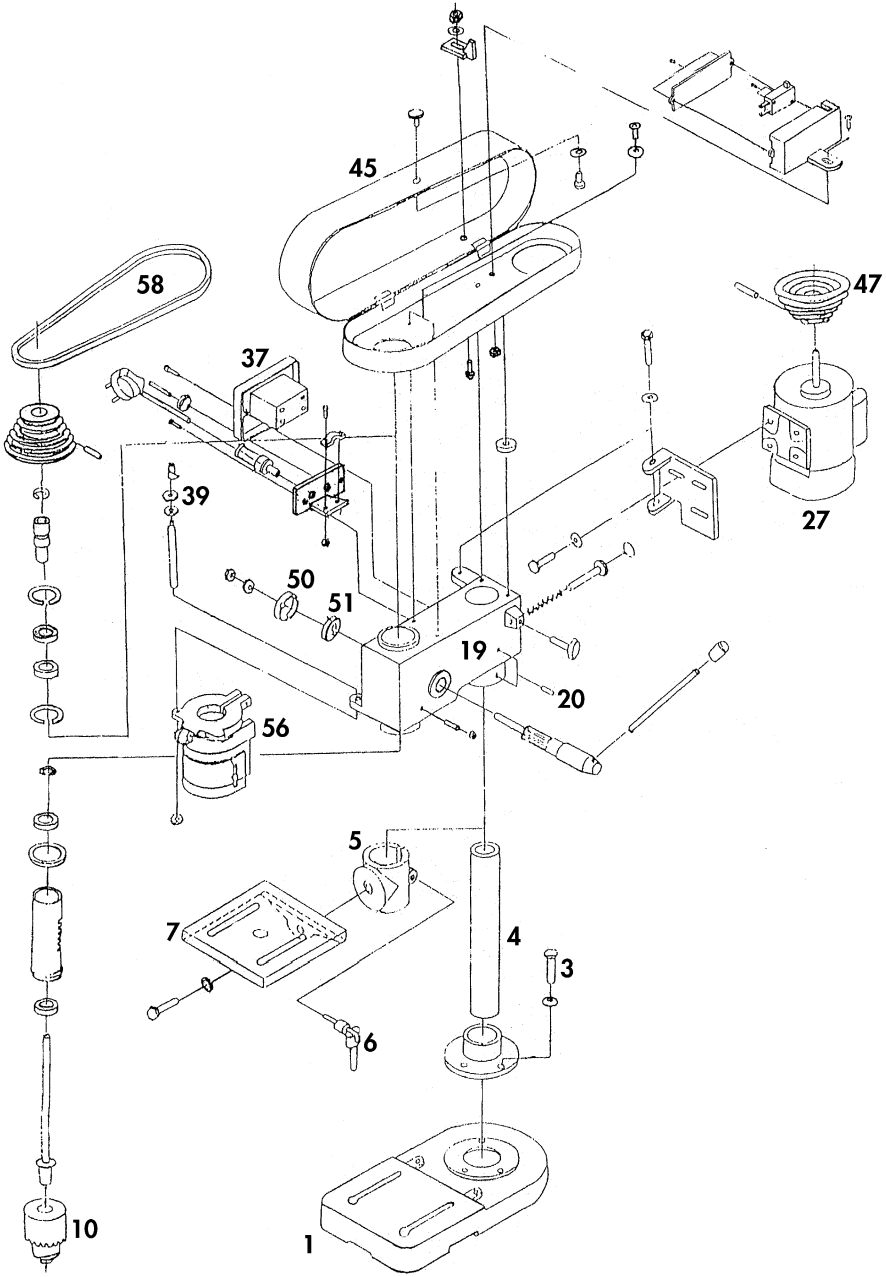


Fig.J

Fig.E

Spindle Pulley Motor

EXPLODED VIEW



SPARE PARTS LIST

REF NR	DESCRIPTION	FERM NR
27	MOTOR	311053
37	MAGNETIC SWITCH	311051
50	COVER FOR SPRING	311059
51	SPRING	311058
56	CHUCK GUARD	311055
58	V-BELT	800157
10	CHUCK	311054
-	CHUCK KEY	311057
-	CONDENSER	311056

UK English

TABLE DRILLING MACHINE TECHNICAL SPECIFICATIONS

Voltage	230 V
Frequency	50 Hz
Power input	500 W
No load speed	390-2340/min
Number of speeds	9
Chuck capacity/Morse Conical	16 mm/B-16
Weight	21 kg
Lpa (sound pressure level)	62 dB(A)
Lwa (sound power level)	75 dB(A)
Vibration value	1.56 m/s2

PRODUCT INFORMATION

Fig.A

1. On/off switch
2. Drill dept gauge
3. Protection guard
4. Motor
5. Drill dept lever
6. Table adjustment

Check first whether or not the delivery has been damaged by transport and/or whether all the parts are present.

SAFETY INSTRUCTIONS

The following pictograms are used in these instructions for use:

Denotes risk of personal injury, loss of life or damage to the tool in case of non-observance of the instructions in this manual.

Denotes risk of electric shock.

Carefully read this manual before using the machine. Make sure that you know how the machine functions and how to operate it. Maintain the machine in accordance with the instructions to make sure it functions properly. Keep this manual with the machine.

Warning! *When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury. Read all these instructions before attempting to operate this product and save these instructions.*

1. **Keep work area clean**
   Cluttered areas and benches invite injuries.
2. **Consider work environment**
   Do not expose power tools to rain. Do not use power tools in wet or damp locations. Keep work area well lit. Do not use power tools in the presence of flammable liquids or gases.
3. **Guard against electric shock**
   Prevent body contact with grounded surfaces (e.g. pipes, radiators, ranges, refrigerators).
4. **Keep children and pets away**
   Do not let children or pets come in contact with the tool or the extension cable. All children and pets should be kept away from work area.
5. **Storing tools**
   When not is use, tools should be stored in dry, high, or locked location out of reach of children.
6. **Do not force the tool**
   It will work better and safer at the rate for which it was intended.
7. **Use right tool**
   Do not force small tools or attachment to do the job of a heavy duty tool. Do not use tools for purposes for which they are not intended: for example, do not use a circular saw for cutting trees or logs.
8. **Dress properly**
   Do not wear loose clothing or jewellery. It can get caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
9. **Use safety glasses**
   Also use safety goggles. A dust mask should be worn if cutting or drilling operation is dusty, in particular chipboard and MDF.
10. **Do not abuse cable**
    Never carry tool by the cable or pull it to disconnect it from the power socket. Keep cable away from heat, oil and sharp edges.
11. **Secure work**
    Use clamps or a vice to hold work. It is safer than using your hand and it frees both hands to operate tool.
12. **Do not over-reach**
    Keep a proper footing and balance at all times.
13. **Maintain tools with care**
    Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cable periodically and, if damaged, have repaired by an authorised service facility or electrician. Inspect extension cable periodically and replace if damaged. Keep handles dry, clean and free from oil and grease.
14. **Disconnect tools from the power supply**
    When not in use, before servicing and when changing accessories such as blades, bits and cutters. Always disconnect the appliance from the power supply.
15. **Remove adjusting keys and wrenches**
    Ensure that keys and adjusting wrenches are removed from the tool before switching on.
16. **Avoid unintentional starting**
    Do not carry plugged-in tools with finger on the switch. Ensure that switch is off before being plugged in.
17. **Outdoor use extension cables**
    When tool is used outdoors, use only extension cable intended for use outdoors and marked accordingly. Do not use in the rain.
18. **Stay Alert**
    Watch what you are doing. Use common sense. Do not operate tools when you are tired.

19. Check damaged parts
Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorised service centre unless otherwise indicated elsewhere in the instruction manual. Have defective switches replaced by an authorised service centre. Do not use tool if the switch does not turn it on and off.

20. Warning!
The use of any other accessory or attachment other than recommended in the operation instructions or the catalogue may present a risk of personal injury.

21. Have your tool repaired by an expert
This electric appliance is manufactured in accordance with the relevant safety standards. Repairing of electrical appliances must be carried out only by experts otherwise considerable danger for the user may result.

22. Connect the dust extraction device
Whenever there are facilities for fitting a dust extraction system, make sure it is connected and used.

23. Keep batteries and chargers safe
When using and storing battery chargers for cordless tools, ensure that they are always kept dry and away from dampness otherwise a fire and/or explosion may result.

24. For any queries relating to:
Safety matters concerning this tool, please refer to Omega on Telephone 0115 9661199 (Monday-Friday 8 a.m - 6 p.m Saturday 9 a.m - 1p.m)

SPECIAL SAFETY INSTRUCTIONS

Before using the machine the guidelines must be taken into consideration. Every mechanical or electrical alteration to the machine which does not meet the applicable guidelines carries a considerable accident risk.

During use the following points must be taken into consideration:

- Do not remove any mechanical or electrical protective provisions.
- Check whether all the protective provisions are in place and have been attached correctly.
- Wear safety goggles during drilling.
- If you have long hair, be sure to wear hair protection (hair net or cap). Long hair can easily be caught in moving parts.
- Wear fitted clothing; tie buttons on sleeves.
- Do not hold any workpieces in your hands when drilling. Always use a machine clamp or another clamping tool.
- Protect workpieces and clamping tools on the bench to prevent them from getting caught. Fasten them yourself with screws or clamp them to a machine clamp fastened to the table.
- Check whether the drill holder is tightened properly.
- Check whether cable lead-throughs are okay.
- To remove drill chips only use hand brushes, brushes, rubber wipers, chip hooks or similar aids.
- Do not carry out any cleaning or greasing work while the machine is in operation.
- Always keep V-belts covered (so that your hands cannot become caught).
- Only tighten the toothed ring drill holder by means of the wrench.
- Never leave the wrench of the drill holder in the drill holder! Before switching on the machine, check whether the wrench really has been removed!
- Do not use any drills which are damaged on the shank.
- Drill is not suitable to use as press!
- If the mains cable is damaged, it may only be replaced by a mains cable of the same type.

Immediately switch off the machine when:

- Interruption in the mains plug, mains lead or mains lead damage.
- Defect switch.
- Smoke or stench of scorched isolation.

ELECTRICAL INSTALLATION

The machine is provided with an electrical installation, which meets the standards. Repairs may only be carried out by a recognised professional.

The machine is provided with a zero voltage switch. After the tension drops the machine will not start to run automatically for safety reasons. The machine must be switched on again.

Electrical safety
Always check that the power supply corresponds to the voltage on the rating plate.

Replacing cables or plugs
Immediately throw away old cables or plugs when they have been replaced by new ones. It is dangerous to insert the plug of a loose cable in the wall outlet.

Using extension cables
Only use an approved extension cable suitable for the power input of the machine. The minimum conductor size is 1.5 mm2. When using a cable reel always unwind the reel completely.

ASSEMBLY

Fig.B

- Place the footplate (13) in the correct position.
- Fasten the column (11) with the bolts supplied (12) to the footplate.
- Now slide the table holder (10) with the table over the column (11). With the fastening handle (6) the table is fastened into the desired position.
- Now you can assemble the machine casing (7) and lock with the locking pins (8).
- Since the drill spindle is greased in the factory, it is advisable to run in the machine for approximately 15 minutes at the lowest speed.

Before you push the chuck with pin into the drill spindle, the inside of the chuck must be completely grease-free!

SETTING UP THE BENCH DRILL

Before use the drill must be mounted on a fixed base. The footplate (13) has therefore been provided with drilling holes. By means of screws the footplate can be fixed to the base in this place. If it is mounted on a wooden board, sufficiently large washers must be used on the opposite side, so that the bolts are not pushed into the wood and the machine cannot become loose.

The fastening screws may be fastened so far that the footplate is not under tension or deformed. When the tension is too high there is a risk of breakage.

ADJUSTING THE NUMBER OF REVOLUTIONS OF THE DRILL SPINDLE

Fig.C

The different revolutions of the drill spindle can be adjusted by shifting the V-belt into the belt drive. The machine is protected by a safety switch so that the machine is automaticly switched off when opening the casing.
The V-belt is shifted as follows:

- Open the V-belt cover (14) by loosen the screw on the right side of the cover.
- Loosen the fastening button (18) and slide the engine in the direction of the machine head, upon which the V-belt is released.
- Shift the V-belt according to the table on the inside of the V-belt cover.
- Tension the V-belt again by pushing the engine plate (17) to the back. Then the tensioning device is fastened with the fastening button (18).
- Close the V-belt cover and the machine is ready again for use.

Keep the V-belt cover closed during use.

V-BELT TENSION

Fig.D

If you have shifted the V-belt, you must tighten it again by means of the engine plate (17) with the fastening button (18). The tension is correct when the V-belt can be pressed in by approximately 1 cm.

The engine pulley must be aligned horizontally, so that early wear and loosening of the V-belt can be prevented. For this purpose the engine pulley on the engine can be slid along the engine axle, after loosening the socket head screw.

SPINDEL SPEEDS

Fig.E

Position V-belt		
1) A-4 / 390	***2) B-4 / 620***	***3) A-3 / 650***
4) C-4 / 780	***5) A-2 / 820***	***6) B-3 / 1020***
7) C-2 / 1630	***8) B-1 / 1830***	***9) C-1 / 2340***

The number of revolutions of the drill spindle of the V-belt combinations can be read from the illustration and the table.

DRILL SPINDLE AND DRILL HEAD PIN

All the blank parts of the machine are provided with a protective lacquer layer, which prevents rust formation. This protective lacquer layer is easy to remove by means of environmentally friendly solvents. Test the V-belt tension before you connect the machine to the electricity mains.

The inside of the drill spindle must be degreased completely. For this purpose use environmentally friendly solvents. Proceed in the same way with the drill head pin. A correct transmission can only be achieved in this way.

OPERATION, HINTS AND TIPS

DEPT STOP
Fig.F
The drill spindle is provided with a depth stop. It can be adjusted using the nut. The drill depth can be read on the scale division.

CLAMPING THE DRILL
Fig.G
In the drill head of the bench drill, drills and other tools with a cylindrical shank can be clamped. The moment of rotation is transferred to the drill by means of the tension of the three clamping jaws. To prevent the drill from sliding away, it must be clamped using the toothed ring wrench. If the drill slides away in the drill holder, a slight burr occurs on the drill shank, which makes centric clamping impossible. A burr which occurs in this way must in any case be removed by grinding

CLAMPING THE WORKPIECE
Fig.H
The drill bench and the footplate of the bench drill are provided with grooves for fastening clamping tools. Always clamp the workpiece in the machine clamp or other clamping tools. In this way you will prevent accidents and even increase the drilling accuracy because the workpiece is in a fixed position.

ADJUSTING THE BENCH
Fig.I
The drill bench is fastened to the drill column and can be adjusted in height after loosening the fastening handle. Adjust the bench in such a way that there is still enough space between the top of the workpiece and the point of the drill. You can also swivel the bench sideways, if you wish to clamp a workpiece directly onto the footplate.

Fig.J
For slanted drilling and with a slanted supporting surface of the workpiece the bench can be swivelled. For this purpose loosen the hexagonal screw (20) on the hinge point (21) of the bench and remove the centring. Swivel the bench (19) to the desired position. Then screw down the hexagonal screw (20) properly using a wrench.

NUMBER OF REVOLUTIONS, SPEED OF ROTATION, SUPPLY
The supply - the feed motion of the drill - takes place by hand on the 3-armed drill lever. The speed of rotation is determined by the number of revolutions of the drill spindle and by the diameter of the drill.

The correct choice of supply and the number of revolutions of the drill spindle are the deciding factors for the lifespan of the drill. The following applies as a basic rule: with a larger diameter of the drill the number of revolutions must be adjusted lower; the greater the firmness of the workpiece, the greater the cutting pressure must also be. In order not to overheat the drill in this case, the supply and speed of rotation must be lowered at the same time. In addition, the drill must be cooled with drill oil.

For thin plates, quite large drillings must be carried out carefully with little supply and little cutting pressure, so as to get a precise result and so that the drilling remains the correct size. For deep drilling (larger than 2 x the diameter of the drill) the discharge of chips is more difficult and the temperature of the drill is higher. Therefore lower the supply and the number of revolutions and ensure a better discharge of chips by regularly pulling back the drill. For drilling with a greater diameter than 8 mm, pre-drilling must take place, so that early wear of the drill - main cutting edge can be avoided and so that the drilling point is not too heavily loaded.

MAINTENANCE

Make sure that the machine is not live when carrying out maintenance work on the motor.

The Ferm machines have been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper machine care and regular cleaning.

Cleaning
Keep the ventilation slots of the machine clean to prevent overheating of the engine.
Regularly clean the machine housing with a soft cloth, preferably after each use. Keep the ventilation slots free from dust and dirt.
If the dirt does not come off use a soft cloth moistened with soapy water. Never use solvents such as petrol, alcohol, ammonia water, etc. These solvents may damage the plastic parts.

Lubrication
The machine do not need to be greased. All bearings and driving gears are maintenance-free and greased for life. The drill must be cleaned with compressed air or a dry cloth. It is advisable to clean the blank parts from time to time with environmentally friendly solvents and to only grease withacid-free oil or grease.

Faults
Should a fault occur, e.g. after wear of a part, please contact your local Ferm dealer.
In the back of this manual you find an exploded view showing the parts that can be ordered.

ENVIRONMENT
In order to prevent the machine from damage during transport, it is delivered in a sturdy packaging. Most of the packaging materials can be recycled. Take these materials to the appropriate recycling locations.
Take your unwanted machines to your local Ferm-dealer. Here they will be disposed of in an environmentally safe way.

GUARANTEE
The guarantee conditions can be found on the separately enclosed guarantee card.

CE DECLARATION OF CONFORMITY (UK)

We declare under our sole responsibility that this product is in conformity with the following standards or standardized documents

EN61029-1, EN55014-1, EN55014-2
EN61000-3-2, EN61000-3-3
in accordance with the regulations.

98/37/EEC
73/23/EEC
89/336/EEC

from 03-02-2000
GENEMUIDEN NL
W. Kamphof
Quality department