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scheppach DP16SL Bench Drill with Cross Line Laser Instruction Manual

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DP16SL Tabletop drill Translation of original instruction manual



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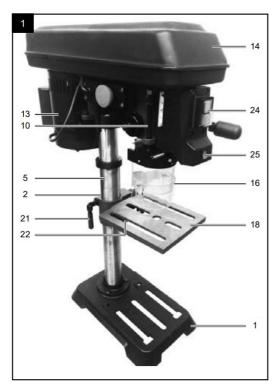
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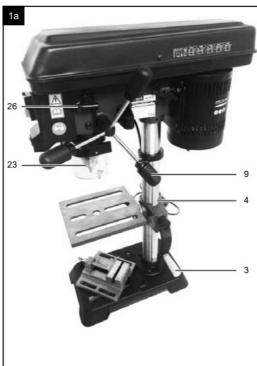
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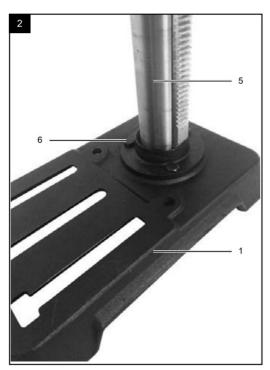
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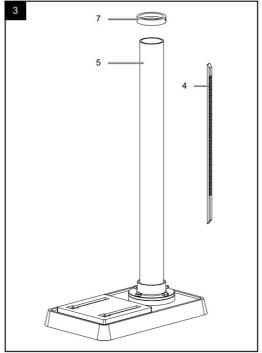
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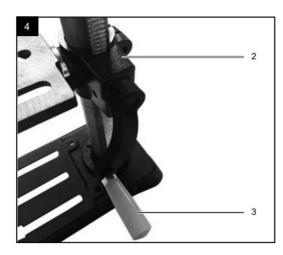
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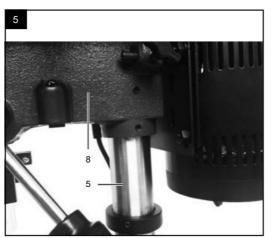


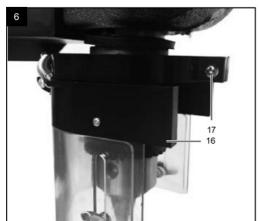




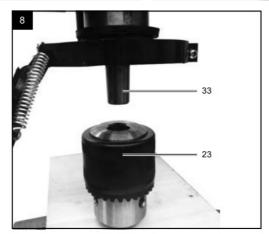


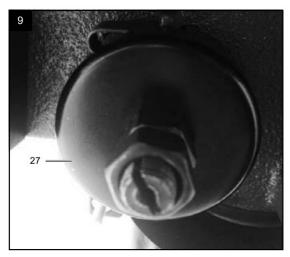


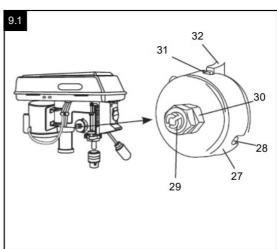




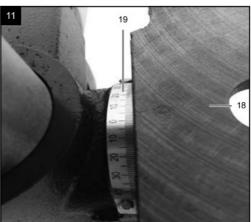


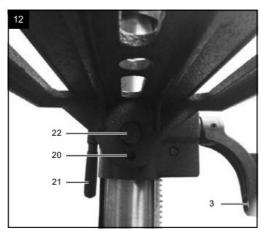




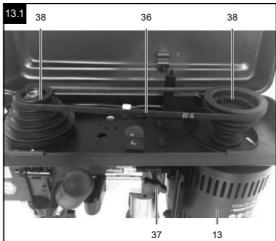


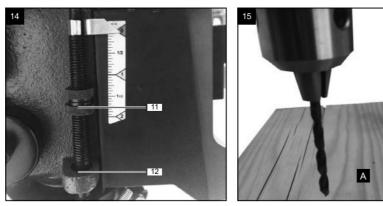


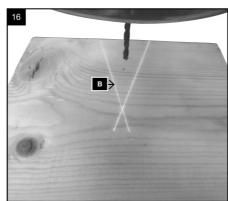


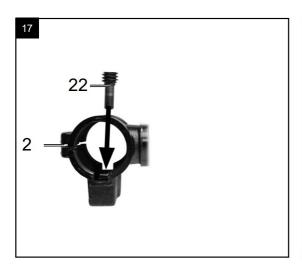


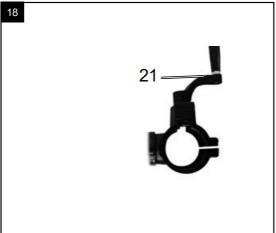




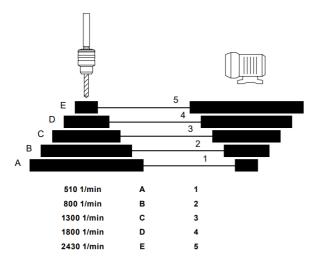








DP16SL Belt adjustment - Speed



Explanation of the symbols on the device

Symbols are used in this manual to draw your attention to potential hazards. The safety symbols and the accompanying explanations must be fully understood. The warnings themselves will not rectify a hazard and cannot replace proper accident prevention measures.



Warning! Potential danger to life, risk of injury or damage to the tool when ignoring the instructions.



Before commissioning, read and observe the operating instructions and safety instructions!



Wear safety goggles!



Wear hearing protection!



If dust builds up, wear respiratory protection!



Do not wear long hair uncovered. Use a hair net.



Do not wear gloves.



Attention! Laser beam



Introduction

Manufacturer:

Scheppach GmbH Günzburger Straße 69 D-89335 Ichenhausen

Dear Customer,

We hope that your new device brings you much enjoyment and success.

In accordance with the applicable product liability laws, the manufacturer of the machine assumes no liability for damage to the machine or caused by the machine arising from:

- · Improper handling.
- · Failure to comply with the operating instructions.
- · Repairs carried out by third parties, unauthorised specialists.
- · Installing and replacing "non-original spare parts".
- · Application other than specified
- Failure of the electrical system in the event of the electrical regulations and VDE provisions 0100, DIN 57113/VDE 0113 not being observed.

Please consider:

Read the whole text of the operating manual before assembly and commissioning. This operating manual should help you to familiarise yourself with your device and to use it for its intended purpose. The operating manual includes important instructions for safe, proper and economic operation of the device, for avoiding danger, for minimising repair costs and downtimes, and for increasing the reliability and extending the service life of the device. In addition to the safety instructions in this operating manual, you must also observe the regulations applicable to the operation of the device in your country. Keep the operating manual at the device, in a plastic sleeve, protected from dirt and moisture. They must be read and carefully observed by all operating personnel before starting the work. The device may only be used by personnel who have been trained to use it and who have been instructed with respect to the associated hazards. The required minimum age must be observed. In addition to the safety instructions in this operating manual and the separate regulations of your country, the generally recognised technical rules relating to the operation of such machines must also be observed. We accept no liability for accidents or damage that occur due to a failure to observe this manual and the safety instructions.

Device description (Fig. 1)

- 1. Base plate
- 2. Drilling table holder
- 3. Adjustment handle for height adjustment
- 4. Toothed rack column
- 5. Column
- 6. Screw
- 7. Ring
- 8. Machine head
- 9. Handle
- 10. Depth stop
- 11. knurled nut
- 12. Stop
- 13. Engine
- 14. Belt guard
- 15. Locking screw
- 16. Chuck guard
- 17. Slotted screw

- 18. Drilling table
- 19. Angle scale
- 20. Screw 90° attachment
- 21. Clamping handle for height adjustment
- 22. Clamping screw for drilling table
- 23. Sprocket chuck
- 24. On/off switch
- 25. Laser ON/OFF switch
- 26. Chuck key
- 27. Spring cap
- 28. Groove
- 29. Outer nut
- 30. Inner nut 31. Notch
- 32. Hub
- 33. Spindle
- 34. Lock nut
- 35. Screw
- 36. Drive belt
- 37. Wing screw
- 38. Pullevs

Scope of delivery

- · After unpacking check all parts for transport dam- age. In the event of complaints the carrier must be informed immediately.
- · Later claims will not be recognised.
- · Check whether the shipment is complete.
- Familiarise yourself with the product by means of the operating instructions before using for the first time.
- With accessories as well as wearing parts and replacement parts use only original scheppach parts.
 - Replacement parts can be obtained from your dealer.
- · When ordering, please provide our article number as well as type and year of manufacture for your equipment.

The device and the packaging are not children's toys! Do not let children play with plastic bags, films or small parts! There is a danger of choking or suffocating!

- Base plate (1)
- Column (5)
- Drilling table (18)
- Machine head (8)
- Sprocket chuck (23)
- Chuck key (26)
- · Chuck guard (16)
- Handle (9) (3x)
- Depth stop (10)
- Allen key
- · Enclosed accessories bag
- · Original Operating Manual

Proper use

The tabletop drill is intended to drill metal, plastic, wood and similar materials, and may only be used in private households.

Food and materials that pose a health hazard are not permitted to be processed using the machine. The chuck is only suitable for use with drill bits and tools with a shaft diameter of 1,5 - 13 mm and a cylindrical tool shaft. Furthermore, tools with a tapered shaft can also be used. The device is intended for use by adults. The machine may only be used in the intended manner.

Any use beyond this is improper. The user/operator, not the manufacturer, is responsible for damages or injuries of any type resulting from this.

The device is only intended to be used for DIY purposes. It was not designed for continuous commercial use. The device is not intended for use by people under the age of 16. Children under the age of 16 may only use the device when supervised. The manufacturer is not liable for damage caused by improper use or incorrect operation.

Please observe that our equipment was not designed with the intention of use for commercial or industrial purposes. We assume no guarantee if the equipment is used in commercial or industrial applications, or for equivalent work.

General safety information

General power tool safety warnings

WARNING! Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

- a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the

fumes

c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Electrical safety

- a) Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of elec- tric shock if your body is earthed.

- c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- d) Do not use the cable for another purpose, for example, carrying or hanging the power tool or pulling the plug out of the socket. Keep the cable away from heat, oil, sharp edges or moving device parts. Damaged or coiled cables increase the risk of an electric shock.
- e) If you work with a power tool outdoors, only use extension cables that are also suitable for outdoor use. Using an extension cable suitable for outdoor use reduces the risk of an electric shock.
- f) If you cannot avoid using the electrical tool in a wet environment, use a fault-current circuit breaker. Use of an RCD reduces the risk of electric shock.

Personal safety

- a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of carelessness when using electrical tools can result in serious injuries.
- b) Use personal protective equipment. Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- c) Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- d) Remove any adjusting key or wrench before turning the power tool on. A tool or spanner that is located in a rotating device part may result in injuries.
- e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- f) Dress properly. Do not wear loose clothing or jewellery. Keep hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- g) If dust extraction and collection devices can be mounted, make sure that they are connected and used properly. Use of dust collection can reduce dust-related hazards.
- h) Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a

fraction of a second.

Power tool use and care

- a) Do not overload the device. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- b) Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- e) Maintain power tools and accessories. Check whether moving parts function properly and do not get stuck and whether parts are broken or are damaged and thus adversely affect the electric tool function. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.
- h) Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

Service

a) Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

Safety instructions for drills

- a) The drill must be secured. An incorrectly secured drill can move or topple and this can result in injuries.
- b) The workpiece must be clamped or fastened to the workpiece support. Do not drill into workpieces that are too small to be securely clamped. Holding the workpiece by hand can lead to injuries.
- c) Do not wear gloves. Gloves can be caught by rotating parts or drilling debris and thus cause injuries.
- d) Keep your hands away from the drilling area whilst the electrical tool is running. Contact with rotating parts or drilling debris can cause injuries.
- e) The drill must be turning before it makes contact with the workpiece. Otherwise, the drill bit can catch in the workpiece and this can result in an unexpected movement of the workpiece and cause injuries.
- f) If the drill becomes jammed, stop pressing downwards and switch the electrical tool off. Investigate and rectify the cause of the jamming. Jamming can result in an unexpected movement of the workpiece and can result in serious injuries.
- g) Avoid long pieces of drill swarf by interrupting the downward pressure at regular intervals. Sharp metal swarf can become tangled and lead to injuries.
- h) Never remove drilling debris from the drilling area whilst the electrical tool is running. To remove swarf, move the drill away from the workpiece, switch off the electrical tool and wait until the drill has come to a standstill. Use an aid such as a brush or a hook to remove the swarf. Contact with rotating parts or drilling debris can cause injuries. i) The permissible rotational speed for drill bits with a rated speed must be at least as high as the highest speed cited on the electrical tool. Accessories that rotate faster than permitted can break and fly off at high speed.

Attention: Laser radiation Do not look into the beam Laser class 2



Protect yourself and you environment from accidents using suitable precautionary measures!

- Do not look directly into the laser beam with unprotected eyes.
- Never look into the path of the beam.
- Never point the laser beam towards reflecting surfaces and persons or animals. Even a laser beam with a low output can cause damage to the eyes.
- Caution methods other than those specified here can result in dangerous radiation exposure.
- Never open the laser module. Unexpected exposure to the beam can occur.
- If the mitre saw is not used for an extended period of time, the batteries should be removed.
- The laser may not be replaced with a different type of laser.
- Repairs of the laser may only be carried out by the laser manufacturer or an authorised representative.

Adhere to the correct mains voltage!

Ensure that the mains voltage corresponds to the specifications on the type plate.

Use an earthed socket!

The device may only be operated using a socket with properly installed fuse protection.

Workplace safety

Ensure that the machine is stable and secure. If possible, secure the machine to a floor plate or a workbench.

Protection against electric shock!

Protect the device against moisture. The device must not be moist nor operated in a moist environment. Check the device and the mains connection cable with plug prior to each use. Avoid physical contact with earthed parts such as pipes, radiators, etc.

Protect against fire or explosion!

There are sparking components inside the device. Do not use the device in the vicinity of combustible fluids or gases. There is a risk of fi re or explosion if disregarded.

WARNING! This power tool generates an electromagnetic field during operation. This field can impair active or passive medical implants under certain conditions. In order to prevent the risk of serious or deadly injuries, we recommend that persons with medical implants consult with their physician and the manufacturer of the medical implant prior to operating the power tool.

Residual risks

The power tool is state-of-the-art and has been built according to the recognised technical safety regulations. However, individual residual risks can arise during operation.

- . Danger to health due to the rotating tool if hair is long and clothing loose. Wear personal protective equipment such as a hair net and close-fitting clothing.
- Risk to health due to fl ying chips. Wear personal protective equipment such as eye protection.
- Injuries due to the workpiece being ejected at high speed due to improper holding or guiding, such as working without the vice or stop.
- Health hazard due to electrical power, with the use of improper electrical connection cables.
- Furthermore, despite all precautions having been met, some non-obvious residual risks may still remain.
- Residual risks can be minimised if the "safety instructions" and the "Proper use" are observed along with the whole of the operating instructions.
- · Avoid accidental starting of the machine: the operating button may not be pressed when inserting the plug in an outlet.
- Use the tool that is recommended in this manual. This is how to ensure that your drill provides optimum performance.
- Keep your hands away from the working area when the machine is in operation.
- · Before performing setting or maintenance work, switch the device off and unplug the mains plug.

Technical data

| Length x width x height | 235 x 482 x 730 mm |
|-----------------------------------|------------------------------------|
| Table size | 194 x 165 mm |
| Table pivot range | -45 ° / 0 ° / 45 ° |
| Table turning range | 360 ° |
| Gap between chuck and table | 305 mm |
| Gap between chuck and floor plate | 405 mm |
| Column ø | 48 mm |
| Chuck adapter | B16 |
| Drill chucking range | 1,5 – 13 mm |
| Maximum drilling depth | 50 mm |
| Speed levels | 510 - 800 - 1300 - 1800 - 2430 rpm |
| Engine | 230V / 50Hz |
| Engine output | 550 W |
| Operating mode | S2 10min |
| Cable length | 1830 mm |

Technical changes reserved!

Noise data

Weight

The noise and vibration levels have been determined in accordance with EN 3746.

The stipulated values are emission values and so do not necessarily represent safe working values. Although there is a correlation between emission levels and exposure levels, it is not possible to reliably determine whether additional precautionary measures will be required or not based on this. Factors that could influence the exposure level present at any given time in the work area include the duration of exposure, the nature of the working area, other noise sources etc. e.g. the number of machines and neighbouring processes. The permissible working values can also vary from country to country. However, this information should enable the operator to better evaluate the hazards and risks.

22 kg

Sound pressure level during work LpA 69 dB (A)
Uncertainty KpA 3 dB
Sound power level during work LWA 82 dB (A)
Uncertainty KWA 3 dB

Assembly

8.1 Column (5) and base plate (1) (Fig. 2)

- 1. Set the base plate foot (1) down on the floor or the workbench.
- 2. Place the column (5) on the base plate (1) so that the holes on the column (5) align with the holes on the base plate (1).
- 3. Screw the three screws (6) to fasten the column (5) into the base plate (1) and tighten them using an open-ended spanner (size 13).

8.2 Removing the toothed rack (4) (Fig. 3)

In order to be able to install your drill, you must first remove the toothed rack (4).

- 1. Use an Allen key (size 3) to remove the ring (7) and pull this off the column (5).
- 2. Now pull the toothed rack (4) out.

8.3 Pre-installing the drilling table holder (Fig. 17+18)

- 1. Push the crank holder (22) through the hole in the drilling table holder (2) from the inside.
- 2. Put the crank handle (21) on the crank holder and use the Allen key to secure the crank handle (3).

8.4 Installing the drilling table holder (2) (Fig. 4)

- 1. Insert the toothed rack (4) into the groove on the drilling table holder (2).
- 2. Align the toothed rack (4) centrally in relation to the drilling table holder (2).
- 3. When bringing the toothed rack (4) together within the groove, ensure that the tooth meshing between the toothed rack (4) and the drilling table holder (2) is correct
- 4. Now place the drilling table holder (2) with the toothed rack (4) on the column (5) and guide the toothed rack (4) into the bottom rack guide on the column foot.
- 5. Use the ring (7) to secure the toothed rack (4). Ensure that the toothed rack guideon the ring (7) is pointing downwards. Tighten the integrated grub screw to affix the ring (7).
- 6. Connect the adjustment handle for height adjustment (3) to the drilling table holder's shaft (2) and use a grub screw to secure it.

8.5 Installing the machine head (8) and column (5) (Fig. 5)

- 1. Place the machine head (8) on the column (5).
- 2. Align the drill's spindle (33) with the drilling table (18) and the base plate (1), and tighten the 2 grub screws located on the side of the machine head (8). (Size 4 Allen key)

8.6 Installing the chuck guard holder (16) (Fig. 6)

1. Place the chuck guard (16) on the spindle tube and tighten the slotted screw (17).

8.7 Installing the handles (9) on the vertical drive's crank (Fig. 7)

1. Screw the handles (9) tight in the spindle hub's thread.

8.8 Installing the sprocket chuck (23) (Fig. 8)

- 1. Clean the conical hole in the sprocket chuck (23) and the spindle cone with a clean piece of fabric. Ensure that no particles of dirt remain on the surface. The smallest amount of contamination on one of the surfaces prevents the sprocket chuck (23) holding properly. This can cause the drill bit to wobble. If the conical hole in the sprocket chuck (23) is extremely contaminated, use a cleaning agent on a clean piece of fabric.
- 2. Push the sprocket chuck (23) onto the spindle nose as far as possible.
- 3. Turn the outer ring on the sprocket chuck (23) counterclockwise (when viewed from above) and open the jaws on the sprocket chuck (23).
- 4. Place a piece of wood on the machine table and lower the spindle (33) until it touches the piece of wood. Press tight so that the chuck is secure.

8.9 Install the box column drill on the workbench

Screw the drill tight to a workbench using the holes on the base plate (1) in order to prevent the machine tilting. However, for your own safety, a screw connection on a workbench or similar is strongly recommended.

Settings

Warning:

All required pre-settings for working properly with your drill have already been made in the factory. Please do not modify anything.

Normal wear and use of the tool can make subsequent adjustment necessary.

Warning

Always pull the plug out of the socket prior to performing setting work.

9.1 Setting the spindle return spring (Fig. 9+9.1)

The spindle return spring may have to be set, as it's tension has changed and therefore, the spindle (33) moves back too quickly or too slowly.

- 1. Lower the drilling table (18) for more space to work.
- 2. Work on the left of the drill.
- 3. Insert a screwdriver into the front groove (28) and keep this in position.
- 4. Use an open-ended spanner (size 14) to remove the outer nut (29)
- 5. With the screwdriver still in the groove (28), loosen the inner nut (30) until the notch (31) releases from the hub (32). ATTENTION, springs are tensioned!
- 6. Turn the spring cap (27) carefully in an counterclockwise direction using the screwdriver until you can press the groove (28) into the hub (32).
- 7. Lower the spindle (33) into the lowest position and keep the spring cap (27) in position. Once the spindle (33) moves up and down as you require, re-tighten the inner nut (30).
- 8. If it is too loose, repeat steps 3-5. If it is too tight, repeat step 6 in reverse order.
- 9. Use an open-ended spanner to secure the outer nut (29) against the inner nut (30).
- 10. NOTE: Do not over-turn and do not limit the range of movement of the spindle (33)!

9.2 The axial play for the spindle (33) (Fig. 10)

When the spindle (33) is in the bottom position, turn it manually. If you determine that the play is excessive, proceed as follows:

- 1. Loosen the counternut (34).
- 2. Turn the screw (35) clockwise in order to compensate for the play without impairing the upwards and downwards movement for the spindle (33) (a small amount of play is normal).
- 3. Re-tighten the counternut (34).

Commissioning

Warning:

If you are not familiar with this type of machine, obtain advice from a specialist. You must have read and understood the usage and safety information before you work with

this product.

10.1 ON/OFF switch (24)

- Switching on: Press the "I" button.
- Switching off: Press the "0" button.

10.2 Swivelling the table (Fig. 11+12)

Note: The angle scale (19) is only intended as a rough guideline for angle setting. Suitable protractors must be used for precision work.

- 1. In order to move the drilling table (18) into the inclined position, use a size 19 open-ended spanner to undo the clamping screw (22) and use a size 10 open-ended spanner to remove the screw (20) that is used for 90° fixing.
- 2. Use the angle scale (19) to set the required angle.
- 3. Re-tighten the clamping screw (22).

10.3 Setting the table height (Fig. 11+12)

- 1. Loosen the clamping handle for height adjustment (21).
- 2. Set the drilling table (18) to the required height by cranking the adjustment handle for height adjustment (3).
- 3. Re-tighten the clamping handle for height adjustment (21).

Note:

We recommend setting the table height so that the tip of the drill bit is just above the workpiece.

10.4 Handling the sprocket chuck (23)

Your tabletop drill is equipped with a sprocket chuck (23). In order to insert a drill bit, first fold the chuck guard (16) up, then insert the drill bit and tighten the sprocket chuck (23) with the chuck key (26) supplied. Remove the chuck key again (26). Ensure that the clamped tools are tight.

Clamping the drill bit

Always ensure that the mains plug is removed when changing the tool.

Only cylindrical tools with the specified maximum shaft diameter are permitted to be clamped in the sprocket chuck (23). Only use faultless and sharp tools. Do not use any tools with damaged shafts or that are deformed or damaged in any other way. Only use accessories and additional equipment that are specified in the operating manual or that have been approved by the manufacturer.

- 1. Insert the drill bit deeply enough into the sprocket chuck (23) that the chuck's jaws can grip in an optimum manner. (Ensure that the jaws do not touch the drill bit's spirals on small drill bits).
- 2. Ensure that the drill bit is centred in the sprocket chuck (23).
- 3. Use the chuck key (26) to tighten the chuck sufficiently so that he drill bit cannot slip when working.

Attention! Do not leave the chuck key (26) inserted. Danger of injury due to the chuck key (26) ejecting.

Changing the sprocket chuck (23)

Turn the outer ring on the sprocket chuck (23) as far as possible in an counterclockwise direction. Tap the sprocket chuck (23) gently with a wooden or rubber hammer. Hold the chuck with the other hand when it slides off the spindle (33).

10.5 Working speeds

Ensure that the speed is correct when drilling. This depends on the drill bit diameter and the material.

The list below helps you to choose speeds for the var- ious materials.

The specified speeds are only guideline values.

| Drill bit ø | Cast iron | Stee | Iron | Aluminium | Bronze |
|-------------|-----------|------|------|-----------|--------|
| 3 | 2550 | 1600 | 2230 | 9500 | 8000 |
| 4 | 1900 | 1200 | 1680 | 7200 | 6000 |
| 5 | 1530 | 955 | 1340 | 5700 | 4800 |
| 6 | 1270 | 800 | 1100 | 4800 | 4000 |
| 7 | 1090 | 680 | 960 | 4100 | 3400 |
| 8 | 960 | 600 | 840 | 3600 | 3000 |
| 9 | 850 | 530 | 740 | 3200 | 2650 |
| 10 | 765 | 480 | 670 | 2860 | 2400 |
| 11 | 700 | 435 | 610 | 2600 | 2170 |
| 12 | 640 | 400 | 560 | 2400 | 2000 |
| 13 | 590 | 370 | 515 | 2200 | 1840 |
| 14 | 545 | 340 | 480 | 2000 | 1700 |
| 16 | 480 | 300 | 420 | 1800 | 1500 |

Setting the speed and V-belt tension for dp16 sl (Fig. 13 and 13.1)

Attention!

Always unplug the mains plug before opening the cover. Always wait until the machine has come to a complete standstill prior to performing maintenance / setting work (danger of injury)! Never run the drill when the V-belt cover is open. Never reach into the V-belt while it is running.

You can set various spindle speeds on your box column drill:

- 1. Once you have switched the device off, you can open the belt guard (14) by undoing the locking screw (15). All adjustment options for the spindle speed are available on the machine's belt guard (14)
- 2. Slacken the drive belt (36) on the right of the machine head (8) by undoing the wing screw (37). Pull the right of the motor (13) slightly towards the spindle (33) in order to slacken the drive belt (36)
- 3. Place the drive belt (36) around the corresponding pulleys (38).
- 4. Press the right of the motor (13) backwards in order to tension the drive belt (36) again.
- 5. Re-tighten the wing screw (37). The drive belt (36) should have around 13 mm of play when you press it together in the middle.
- 6. Close the belt guard (14) and tighten the locking screw (15).
- 7. If the drive belt (36) slips during operation, re-adjust the belt tension.

Attention:

The pulleys (38) on the opposite side must always be used. If pulleys (38) at a different height are used, the drive belt (36) will be destroyed.

Note: Safety switch

If you wish to set the speed, you must open the cover. In order to prevent the danger of injury, the safety switch switches the drill off automatically.

10.6 Depth stop (10) (Fig. 14)

NOTE:

When the clamping device is in the top position, the drill bit's tip must be just slightly above the top of the workpiece.

The depth stop (10) enables the drilling depth to be limited. To do so, set the required drilling depth and use the knurled nuts (11) toscrew it tight against the bottom stop (12).

10.7 Positioning the workpiece (Fig. 15)

Always place a base (A) (e.g. wood) between the table and workpiece. This prevents the rear of the workpiece splitting or breaking when drilling through. In order to prevent the base turning uncontrollably, lean it against the left of the column (5) as illustrated.

Warning

If the workpiece or the base is not long enough for this, clamp it to the table, as otherwise, serious injuries may occur.

Note

Use the machine vice (accessory) for smaller workpieces that cannot be clamped to the table. The vice must be clamped or screwed to the table in order to prevent injuries due to rotating workpieces or the vice, and to prevent destroying the tool.

10.8 Drilling a hole

Use a punch or a sharp nail to mark the location to be drilled on the workpiece. Before you switch the drill on, lower the drill bit onto the workpiece and centre it over the location to be drilled. Switch the machine on and press the drill bit gently onto the workpiece so that it can cut cleanly.

If there is insufficient downward pressure, there is the risk that the drill bit will become hot.

If there is excessive downward pressure, there is the risk that the motor (13) will block, the V-belt or the drill bit will slip, the workpiece will come loose or the drill bit will break

When drilling metal, you may have to cool the drill bit with suitable fluid.

10.9 Working with the laser (Fig. 16)

Switching the laser beam on at the switch (25) Set the illustrated hole in the fixed point (B) on the laser, prepare for drilling and drill the hole.

10.10 Countersinking and centre drilling

You can also use this tabletop drill for countersinking or centre drilling. Note that countersinking must be performed at the lowest speed while a high speed is required for centre drilling.

10.11 Machining wood

Note that suitable dust extraction must be used when machining wood, as wood dust can be harmful to health. Wear a suitable dust protection mask when performing work that generates dust.

Transport

The machine may only be lifted and transported on the belt box or the base plate. Never lift by the safety equipment or the adjustment handles when transporting. Disconnect the machine from the mains in order to transport.

Pay attention to the weight distribution when transporting the machine (the machine is top-heavy). Only transport the machine lying down and secured on a suitable fixture

Cleaning and maintenance

Pull out the mains plug before performing any setting, maintenance or servicing work.

Have tasks that are not described in this operating manual performed by a specialist workshop. Use only original parts. Let the device cool down before all maintenance and cleaning tasks. There is a risk of burns!

Each time before using the device, check it for obvious defects such as loose, worn or damaged parts, or that screws or other parts are tight. Replace damaged parts.

- Clean the ventilation holes and the surface of the device with a soft brush or cloth.
- Remove swarf, dust and dirt with a vacuum cleaner if necessary.
- · Lubricate the moving parts regularly
- Do not allow any lubricants to come into contact with switches, V-belts, drive pulleys and drill lifting arms.

Lubrication

All ball bearings are greased in the factory so that re-greasing is not required.

Lubricate all grooves in the spindle (33) and the toothed rack (4) regularly.

To lubricate the drive, move the axle down and insert the grease into the spindle (33) from above (below the top cover). Move the axle up and down a few times. To lubricate the toothed rack (4), move the axle down and grease the axle's outer surface.

Service information

With this product, it is necessary to note that the following parts are subject to natural or usage-related wear, or that the following parts are required as consumables. Wearing

parts*: carbon brushes, V-belts, batteries, drill bits

* may not be included in the scope of supply!

Spare parts and accessories can be obtained from our Service Centre. Spare parts and accessories can be obtained from our Service Centre.

Storage

Store the device and its accessories in a dark, dry and frost-free place that is inaccessible to children. The optimum storage temperature is between 5 and 30°C. Store the power tool in its original packaging. Cover the power tool to protect it from dust or moisture. Store the operating manual with the power tool.

Electrical connection

The electrical motor installed is connected and ready for operation.

The connection complies with the applicable VDE and DIN provisions.

The customer's mains connection as well as the extension cable used must also comply with these regulations.

Damaged electrical connection cables

The insulation on electrical connection cables is often damaged.

Causes are:

- Pressure points, where connection cables are passed through windows or doors.
- · Kinks where the connection cable has been improp- erly fastened or routed.
- Places where the connection cables have been cut due to being driven over.
- Insulation damage due to being ripped out of the wall outlet.
- · Cracks due to the insulation ageing.

Such damaged electrical connection cables must not be used and are life-threatening due to the insulation damage.

Check the electrical connection cables for damage regularly. Ensure that the connection cables are disconnected from electrical power when checking for damage. Electrical connection cables must comply with the applicable VDE and DIN provisions. Only use connection cables with the marking "H 07 RN". The printing of the type

designation on the connection cable is mandatory.

AC motor

- The mains voltage must be 230 volts/50 Hz.
- Extension cables up to 25 m long must have a cross section of 1.5 square millimetres, and those over 25 m long must have a cross section of at least 2.5 square millimetres.
- The mains connection is protected with a 16 A slowblow fuse.

Disposal and recycling

The device is supplied in packaging to avoid transport damages. This packaging is raw material and can thus be used again or can be reintegrated into the raw material cycle.

The device and its accessories are made of different materials, such as metals and plastics. Take defective components to special waste disposal sites. Check with your specialist dealer or municipal administration!

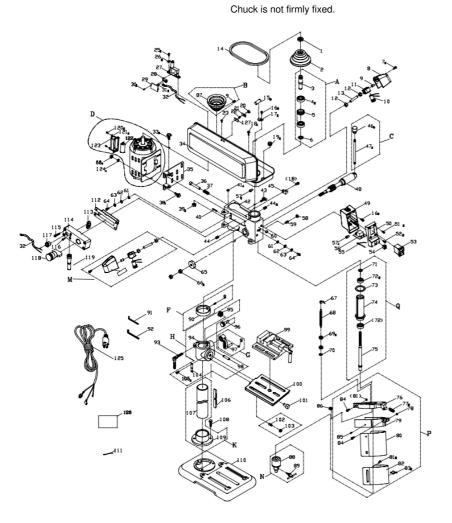
Do not throw old equipment away with household waste!

This symbol indicates that this product must not be disposed of in household waste as per Waste Electrical and Electronic Equipment directive (2012/19/EU) and national laws. This product must be handed over at the intended collection point. This can be done, for example, by returning it when purchasing a similar product or delivering it to an authorised collection point for the recycling of old electrical and electronic devices. Improper handling of old devices can have negative effects on the environment and on human health due to potential hazardous materials which are often contained in old electrical and electronic devices. By disposing of this product properly, you are also contributing to the effective use of natural resources. Information about collection points for old devices can be found at your municipal authority, the local disposal provider, an authorised location for the disposal of old electrical and electronic devices or your waste collection service.

Trouble shooting

Warning: Switch the machine OFF and remove the mains plug from the power outlet.

| Fault | Problem | Solution |
|--|---|--|
| The axis returns to its starting position too quickly or too slowly | The spring pre-tension is set incorrectly. | Setting the spring tension, see also °Spindle return spring°. |
| The chuck keeps loosening from the spindle despite being reattached. | Dirt, grease or oil on the spindle or on the inside of the chuck. | Use a household detergent to clean the surface of the spindle and chuck. See also "Installing the chuck" |
| | Incorrect V-belt tension. | Set the V-belt tension again. See also "Setting the speed and V-belt tension". |
| Link pains lavel devices and attent | The spindle is too dry. | Test the spindle. See also "Lubrication". |
| High noise level during oper- ation | The pulley on the spindle is loose. | Check that the nuts on the pulley are tight and re-tighten if necessary. |
| | The pulley on the motor is loose. | Tighten the set screw on the motor pulley. |
| The wood splits on the drill bit's outlet opening | There is no suitable base under- neath the workpiece. | Use a suitable base. See also "Adjust-ing the table and the workpiece". |
| The workpiece is pulled out of your hand | There is no suitable base under- neath the workpiece or it is secured insufficiently. | Put a base underneath the workpiece or secure it. |
| | Incorrect speed. | Change the speed. See also "Setting the speed and V-belt tension". |
| The drill bit wears out | No chips come out of the hole. | Move the drill bit out of the hole regularly in order to pull the chips out. |
| | The drill bit is blunt. | Sharpen the drill bit. |
| | Insufficient downward pressure. | Increase the downward pressure. |
| The drill bit slips or the hole is not round | Hard places in the woad or the length and angle of the drill bit is different. | Sharpen the drill bit. |
| | The drill bit is bent. | Replace the drill bit. |
| The drill bit gets stuck in the workpiece | The workpiece and drill bit are twisted or the downward pressure is too great. | Place something underneath the workpiece or secure it. Also see "Positioning the workpiece". |
| | Insufficient V-belt tension | Set the V-belt tension. Also see "Selecting the speed and V-belt tension". |
| | The drill bit is bent. | Use a straight drill bit. |
| The drill bit drifts and vibrates excessively | The spindle bearing is worn exces- sively. | Replace the spindle bearing. |
| THE GITH DIE GITHS AND VIDIALES EXCESSIVELY | The drill is not centred in the chuck. | Check the centring. See also "Inserting the drill bit", |
| | Chuck is not firmly fixed. | Correctly fix the chuck. See also "Installing the chuck", |

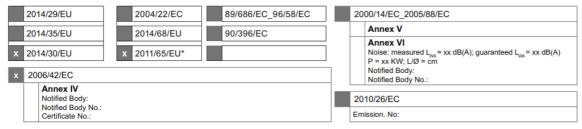




hereby declares the following conformity under the EU Directive and standards for the following article

Article name: TABLETOP DRILLL

- DP16SL



Standard references:

EN 62841-1:2015; EN 62841-3-13:2017; EN 60825-1-2014;

EN 55014-1:2017; EN 55014-2:2015; EN IEC 61000-3-2:2019; EN 61000-3-3:2013+A1:2019

This declaration of conformity is issued under the sole responsibility of the manufacturer.

The object of the declaration described above fulfils the regulations of the directive 2011/65/EU of the European Parliament and Council from 8th June 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

henhausen, den 05.01.2022

Unterschrift / Andreas Pecher / Head of Project Management

First CE: 2020

Subject to change without notice Documents registrar: Ann-Katrin Bloching Günzburger Str. 69, D-89335 Ichenhausen

Warranty

Apparent defects must be notified within 8 days from the receipt of the goods. Otherwise, the buyer's rights of claim due to such defects are invalidated. We guarantee for our machines in case of proper treatment for the time of the statutory warranty period from delivery in such a way that we replace any machine part free of charge which provably becomes unusable due to faulty material or defects of fabrication within such period of time. With respect to parts not manufactured by us we only warrant insofar as we are entitled to warranty claims against the upstream suppliers. The costs for the installation of the new parts shall be borne by the buyer. The cancellation of sale or the reduction of purchase price as well as any other claims for damages shall be excluded.

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Documents / Resources



scheppach DP16SL Bench Drill with Cross Line Laser [pdf] Instruction Manual

DP16SL Bench Drill with Cross Line Laser, DP16SL, Bench Drill with Cross Line Laser, Drill with Cross Line Laser, Cross Line Laser, Line Laser, Line Laser, Cross Line Laser, Cross Line Laser, Cross Line Laser, Line Laser,

References

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