



DRAPER[®]

STORMFORCE

230V 480W

MINI PLUNGE SAW

57475



These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

1. TITLE PAGE

1.1 INTRODUCTION:

USER MANUAL FOR: 230V 480W Mini Plunge Saw

Stock No: 57475

Part No: MPSAW480SF

1.2 REVISIONS:

Date first published January 2019.

As our user manuals are continually updated, users should make sure that they use the very latest version.

Downloads are available from: <http://drapertools.com/manuals>

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1.3 UNDERSTANDING THIS MANUALS SAFETY CONTENT:

WARNING! – Information that draws attention to the risk of injury or death.

CAUTION! – Information that draws attention to the risk of damage to the product or surroundings.

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2. CONTENTS

1. TITLE PAGE	
1.1 INTRODUCTION.....	2
1.2 REVISION HISTORY	2
1.3 UNDERSTANDING THIS MANUAL	2
1.4 COPYRIGHT NOTICE	2
2. CONTENTS	
2.1 CONTENTS.....	3
3. WARRANTY	
3.1 WARRANTY.....	4
4. INTRODUCTION	
4.1 SCOPE.....	5
4.2 SPECIFICATION	5
4.3 HANDLING AND STORAGE	5
5. HEALTH AND SAFETY INFORMATION	
5.1 GENERAL SAFETY INSTRUCTIONS FOR POWER TOOL USE	6-7
5.2 GENERAL SAFETY INSTRUCTIONS FOR ALL SAWS	7-8
5.3 PENDULUM GUARDS.....	8
5.4 ADDITIONAL SAFETY INSTRUCTIONS FOR MINI CIRCULAR SAW BLADES	8-9
5.5 ADDITIONAL SAFETY INSTRUCTIONS FOR LASER PRODUCTS	9
5.6 RESIDUAL RISK	9
5.7 CONNECTION TO THE POWER SUPPLY.....	10
6. TECHNICAL DESCRIPTION	
6.1 IDENTIFICATION	11
7. UNPACKING AND CHECKING	
7.1 PACKAGING	12
7.2 WHAT'S IN THE BOX	12
8. PREPARING THE MINI PLUNGE SAW	
8.1 SETTING THE CUTTING DEPTH	13
8.2 CHANGING THE SAW BLADE	13
9. BASIC MINI PLUNGE SAW OPERATIONS	
9.1 SWITCHING ON THE PLUNGE SAW	14
9.2 RELEASING THE PLUNGE STOP	14
9.3 SETTING THE PARALLEL GUIDE FENCE	14
9.4 LASER LINE GENERATOR	15
9.5 LINE FOLLOWING.....	15
9.6 DUST EXTRACTION	16
9.7 CUTTING	17
9.8 CUT-OUTS.....	18
9.9 CUTTING TOUGH OR ABRASIVE MATERIALS	19
10. MAINTENANCE AND TROUBLESHOOTING	
10.1 MAINTENANCE	20
10.2 TROUBLESHOOTING	20
11. OPTIONAL ACCESSORIES	
11.1 OPTIONAL ACCESSORIES	21
12. EXPLANATION OF SYMBOLS	
12.1 EXPLANATION OF SYMBOLS	22
13. DISPOSAL	
13.1 DISPOSAL.....	23
DECLARATION OF CONFORMITY	ENCLOSED

3. WARRANTY

3.1 WARRANTY

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact

Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF, England.

Telephone Sales Desk: (023) 8049 4333 or Product Help Line (023) 8049 4344.

A proof of purchase **must** be provided with the tool.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This warranty period covering labour is 12 months from the date of purchase except where tools are hired out when the warranty period is 90 days from the date of purchase. The warranty is extended to 24 months for parts only. This warranty does not apply to any consumable parts, any type of battery or normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This warranty applies in lieu of any other warranty expressed or implied and variations of its terms are not authorised.

Your Draper warranty is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the warranty period.

Please note that this warranty is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.

4. INTRODUCTION

4.1 SCOPE

Suitable for sawing of sheet wood. The laser allows for more accurate sawing operations. This item is intended for domestic and infrequent light trade use only. Any application other than it was intended for, is considered misuse.

NOTE: The blade initially installed within the plunge saw is intended for use with wood only.

4.2 SPECIFICATION

Stock No.....	57475
Part No.	MPSAW480SF
Rated voltage	230V~50Hz
Rated input	480W
Saw blade:	
Diameter.....	85mm
Bore Ø.....	10mm
Maximum depth of cut at 90°.....	27mm
Aluminium	3mm
Tile	8mm
Wood	27mm
Revolutions per minute (no load):	3,500r/min
Laser:	
Type.....	Class 2
Output power.....	1mW
Wavelength	650nm
Batteries	2 x 1.5V LR44 Button cells
Sound pressure level (LpA)*:	87.1dB(A)
Sound power level (LWA)**:	98.1dB(A)
Uncertainty (K):	3dB(A)
Vibration level_cutting wood:.....	3.145m/s ²
Vibration level_cutting metal:.....	3.356m/s ²
Uncertainty (K):	1.5m/s ²
Weight (machine only):.....	1.9kg

* *Continuous A-Weighted Sound Pressure Level at the workstation in accordance to and declared according to EN60745.*

** *The typical A-weighted noise level determined according to EN60745.*

4.3 HANDLING & STORAGE

- Care must be taken when handling this product.
 - Dropping this power tool could have an effect on its accuracy and could also result in personal injury. This product is not a toy and must be respected.
- Environmental conditions can have a detrimental effect on this product if neglected.
 - Exposure to damp air can gradually corrode components.
 - If the product is unprotected from dust and debris, components will become clogged.
 - If not cleaned and maintained correctly or regularly, the machine will not perform at its best.

5. HEALTH AND SAFETY INFORMATION

5.1 GENERAL SAFETY INSTRUCTIONS FOR POWER TOOL USE

When using any type of power tool there are steps that should be taken to make sure that you, as the user, remain safe.

Common sense and a respect for the tool will help reduce the risk of injury.

Read the instruction manual fully. Do not attempt any operation until you have read and understood this manual.

Most important you must know how to safely start and stop this machine, especially in an emergency.

Keep the work area tidy and clean. Attempting to clear clutter from around the machine during use will reduce your concentration. Mess on the floor creates a trip hazard. Any liquid spill on the floor could result in you slipping.

Find a suitable location. If the machine is bench mounted, the location should provide good natural light or artificial lighting as a replacement. Avoid damp and dust locations as it will have a negative effect on the machine's performance. If the machine is portable do not expose the tool to rain. In all cases do not operate power tools near any flammable materials.

Keep bystanders away. Children, onlookers and passers by must be restricted from entering the work area for their own protection. The barrier must extend a suitable distance from the tool user.

Unplug and house all power tools that are not in use. A power tool should never be left unattended while connected to the power supply. They must be housed in a suitable location, away locked up and from children. This includes battery chargers.

Do not overload or misuse the tool. All tools are designed for a purpose and are limited to what they are capable of doing. Do not attempt to use a power tool (or adapt it in any way) for an application it is not designed for. Select a tool appropriate for the size of the job. Overloading a tool will result in tool failure and user injury. This covers the use of accessories.

Dress properly. Loose clothing, long hair and jewellery are all dangerous because they can become entangled in moving machinery. This can also result in parts of body being pulled into the machine. Clothing should be close fitted, with any long hair tied back and jewellery and neck ties removed. Footwear must be fully enclosed and have a non-slip sole.

Wear personal protective equipment (PPE). Dust, noise, vibration and swarf can all be dangerous if not suitably protected against. If the work involving the power tool creates dust or fumes wear a dust mask. Vibration to the hand, caused by operating some tools for longer periods must be protected against. Wear vibration reducing gloves and allow long breaks between uses. Protect against dust and swarf by wearing approved safety goggles or a face shield. These are some of the more common hazards and preventions, however, always find out what hazards are associated with the machine/work process and wear the most suitable protective equipment available.

Do not breathe contaminated air. If the work creates dust or fumes connect the machine (if possible) to an extraction system either locally or remotely. Working outdoors can also help if possible.

Move the machine as instructed. If the machine is hand held, do not carry it by the power supply cable. If the product is heavy, employ a second or third person to help move it safely or use a mechanical device. Always refer to the instructions for the correct method.

Do not overreach. Extending your body too far can result in a loss of balance and you falling. This could be from a height or onto a machine and will result in injury.

Maintain your tools correctly. A well maintained tool will do the job safely. Replace any damaged or missing parts immediately with original parts from the manufacturer. As applicable, keep blades sharp, moving parts clean, oiled or greased, handles clean, and emergency devices working.

5. HEALTH AND SAFETY INFORMATION

Wait for the machine to stop. Unless the machine is fitted with a safety brake, some parts may continue to move due to momentum. Wait for all parts to stop, then unplug it from the power supply before making any adjustments, carrying out maintenance operations or just finishing using the tool.

Remove and check setting tools. Some machinery requires the use of additional tools or keys to set, load or adjust the power tool. Before starting the power tool always check to make certain they have been removed and are safely away from the machine.

Prevent unintentional starting. Before plugging any machine in to the power supply, make sure the switch is in the OFF position. If the machine is portable, do not hold the machine near the switch and take care when putting the machine down, that nothing can operate the switch.

Carefully select an extension lead. Some machines are not suitable for use with extension leads. If the tool is designed for use outdoors, use an extension lead also suitable for that environment. When using an extended lead, select one capable of handling the current (amps) drawn by the machine in use. Fully extend the lead regardless of the distance between the power supply and the tool. Excess current (amps) and a coiled extension lead will both cause the cable to heat up and can result in fire.

Concentrate and stay alert. Distractions are likely to cause an accident. Never operate a power tool if you are under the influence of drugs (prescription or otherwise), including alcohol or if you are feeling tired. Being disorientated will result in an accident.

Have this tool repaired by a qualified person. This tool is designed to conform to the relevant international and local standards and as such should be maintained and repaired by someone qualified, using only original parts supplied by the manufacturer. This will ensure the tool remains safe to use.

5.2 ADDITIONAL SAFETY INSTRUCTIONS FOR ALL SAWS

Keep hands away from cutting area and the blade. Keep your second hand on the auxiliary handle, or motor housing. If both hands are holding the saw, they cannot be cut by the blade.

Do not reach underneath the workpiece. The guard cannot protect you from the blade below the workpiece.

Adjust the cutting depth to the thickness of the workpiece. Less than a full tooth of the blade teeth should be visible below the workpiece.

Never hold piece being cut in your hands or across your leg. Secure the workpiece to a stable platform. It is important to support the work properly to minimise body exposure, blade binding or loss of control.

Hold power tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a “live” wire will also make exposed metal parts of the power tool “live” and shock the operator.

When ripping always use a rip fence or straight edge guide. This improves the accuracy of cut and reduces chance of blade binding.

Always use blade with correct size and shape (diamond versus round) of arbour holes. Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.

Never use damaged or incorrect blade washers or bolt. The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.

Causes and operator prevention of kickback:

- Kickback is a sudden reaction to a pinched, bound or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece towards the operator.
- When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back towards the operator.
- If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.

5. HEALTH AND SAFETY INFORMATION

- Kickback is the result of saw misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.
 - Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not in line with the blade. Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.
 - When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur. Investigate and take corrective actions to eliminate the cause of blade binding.
 - When restarting a saw in the workpiece, centre the saw blade in the kerf and check that saw teeth are not engaged into the material. If saw blade is binding, it may walk up or kickback from the workpiece as the saw is restarted.
 - Support large panels to minimise the risk of blade pinching and kickback. Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.
 - Do not use dull or damaged blades. Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.
 - Blade depth and bevel adjusting locking levers must be tight and secure before making cut. If blade adjustment shifts while cutting, it may cause binding and kickback.
 - Use extra caution when making a “plunge cut” into existing walls or other blind areas. The protruding blade may cut objects that can cause kickback.

5.3 PENDULUM GUARDS

Check lower guard for proper closing before each use. Do not operate the saw if lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position. If the saw is accidentally dropped, the lower guard may be bent. Raise the lower guard with the retracting handle and make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.

Check the operation of the lower guard spring. If the guard and spring are not operating properly, they must be serviced before use. The lower guard may operate sluggishly due to damaged parts, gummy deposits, or a build up of debris.

Lower guard should be retracted manually only for special cuts such as “plunge cuts” and “compound cuts”. Raise lower guard by retracting handle and as soon as the blade enters the material, the lower guard must be released. For all other sawing, the lower guard should operate automatically.

Always observe that the lower guard is covering the blade before placing saw down on bench or floor. An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after the switch is released.

5.4 ADDITIONAL SAFETY INSTRUCTIONS FOR CIRCULAR SAW BLADES

Safe Working Practice

Maximum speed. The maximum speed marked on the tool shall not be exceeded. Where stated, the speed range shall be adhered to.

Circular saw blades

- Circular saw blades, the bodies of which are cracked, shall be scrapped (repairing is not permitted).
- Composite (tipped) circular saw blades, where the tip dimension is reduced to less than 1mm, shall be taken out of service.

5. HEALTH AND SAFETY INFORMATION

One piece tools

- Clamping screws shall be tightened according to instructions provided by the manufacturer. Where instructions are not provided, clamping screws shall be tightened in sequence from the centre outwards.
- Use of loose rings or bushes to “make up” bore sizes on circular saw blades shall not be permitted.
- Use of fixed rings, e.g. pressed or held by adhesive fixing, in circular saw blades or flanged bushes for other tools shall be permitted if made to the manufacturers specification.
- Resin shall only be removed from light alloys with solvents that do not affect the mechanical characteristics of these materials.

Repair of tools

- Repair of tools is only allowed according to the tool manufacturers instructions. Particular attention is drawn to the following.
- The design of composite (tipped) tools shall not be changed in the process of repair.
- Composite tools shall be repaired by a competent person, i.e. a person of training and experience, who has knowledge of the design requirements and understands the levels of safety to be achieved.
- Repair shall therefore include, e.g. use of spare parts which are in accordance with the specification of the original parts provided by the manufacturer.
- Tolerances which ensure correct clamping shall be maintained.
- For one piece tools care shall be taken that regrinding of the cutting edge will not cause weakening of the hub and the connection of the cutting edge to the hub.

5.5 ADDITIONAL SAFETY INSTRUCTIONS FOR LASER PRODUCTS

- Laser radiation. **DO NOT STARE INTO BEAM!** Class 2 laser product.
- Viewing the laser output with certain optical instruments (for example, eye loupes, magnifiers and microscopes) with a distance of 100mm may pose an eye hazard.
- Viewing the laser output with certain optical instruments designed for use at a distance (for example, telescopes and binoculars) may pose an eye hazard.
- **Caution:** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- **NEVER** direct the beam towards a person's eyes!
- Avoid positioning the laser such that it may lead to unintentional eye exposure to any potential passing pedestrians/traffic.
- **DO NOT** direct the beam towards animals.
- **DO NOT** use in the vicinity of children.
- **DO NOT** direct the beam onto reflective surfaces.
- Always switch off when not in use and do not leave unattended. Remove the batteries before storing the mini plunge saw away.
- This laser product has no serviceable parts. Do not attempt to disassemble or repair.



5.6 RESIDUAL RISK

Important note: Although the safety instructions and operating manuals for our tools contain extensive instructions for safe working with power tools, every power tool involves a certain residual risk which can not be completely excluded by safety mechanisms. Power tools must therefore always be operated with caution!

5. HEALTH AND SAFETY INFORMATION

5.7 CONNECTION TO THE POWER SUPPLY

This appliance is supplied with a moulded 3 pin mains plug for your safety. The value of the fuse fitted is marked on the pin face of the plug. Should the fuse need replacing, ensure the substitute is of the correct rating, approved to BS1362 and ASTA or BSI Kite marked.

ASTA 

BSI 

The fuse cover is removable with a small plain slot screwdriver. Ensure the fuse cover is replaced before attempting to connect the plug to an electrical outlet. If the cover is missing, a replacement must be obtained or the plug replaced with a suitable type.


If a replacement plug is to be fitted this must be carried out by a qualified electrician.

The damaged or incomplete plug, when cut from the cable should be disabled to prevent connection to a live electrical outlet.

This appliance is Class II[†] and is designed for connection to a power supply matching that detailed on the rating label and compatible with the plug fitted.

If an extension lead is required, use an approved and compatible lead rated for this appliance.

Follow all the instructions supplied with the extension lead.

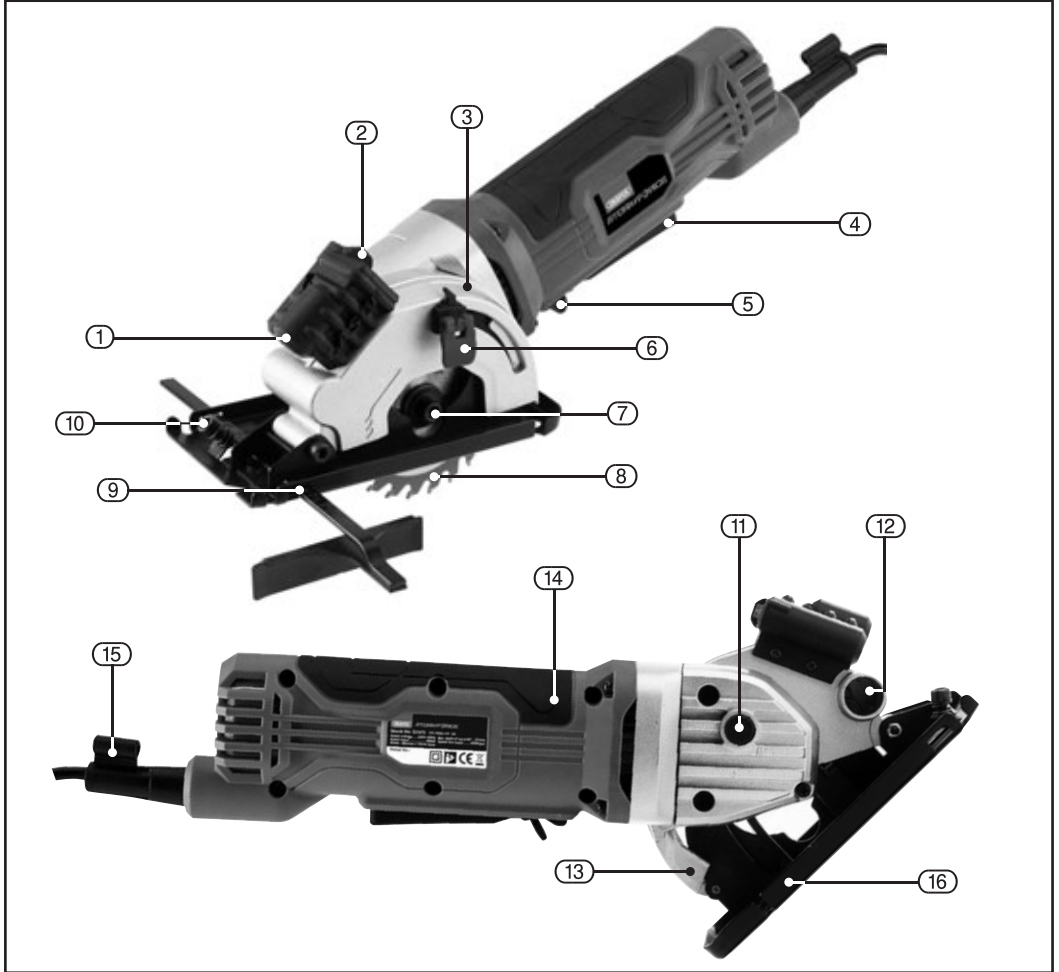
[†]Double insulated : This product requires no earth connection as supplementary insulation is applied to the basic insulation to protect against electric shock in the event of failure of the basic insulation.

IMPORTANT

If using an extension lead, follow the instructions that came with your lead regarding maximum load while cable is wound. If in doubt, ensure that the entire cable is unwound. Using a coiled extension lead will generate heat which could melt the lead and cause a fire.

6. TECHNICAL DESCRIPTION

6.1 IDENTIFICATION



① Laser beam aperture.

② Laser On/off switch.

③ Cutting depth gauge.

④ ON/OFF switch.

⑤ Lock-off lever.

⑥ Cutting depth adjustment & lock.

⑦ Saw blade locking flange bolt.

⑧ Saw blade.

⑨ Parallel guide slot.

⑩ Parallel guide locking screw.

⑪ Spindle lock button.

⑫ Dust extraction outlet.

⑬ Plunge guard lock.

⑭ Soft grip.

⑮ Power cable.

⑯ Base plate.

7. UNPACKING AND CHECKING

7.1 PACKAGING

Carefully remove the product from the packaging and examine it for any sign of damage that may have happened during shipping. Lay the contents out and check them against the parts shown below. If any part is damaged or missing, please contact the Draper Help Line (the telephone number appears on the Title page) and do not attempt to use the product.

The packaging material should be retained at least during the guarantee period, in case the machine needs to be returned for repair.

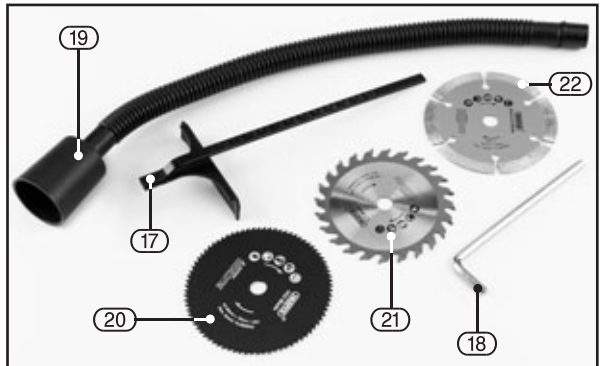
Warning!

- Some of the packaging materials used may be harmful to children. Do not leave any of these materials in the reach of children.
- If any of the packaging is to be thrown away, make sure they are disposed of correctly, according to local regulations.

7.2 WHAT'S IN THE BOX

As well as the main product, there are also several other parts not fitted or attached to it:

- (17) Parallel guide.
- (18) Hex. key.
- (19) Dust extraction hose.
- (20) HSS saw blade for brass, copper, lead, aluminium.
- (21) TCT blade for softwood, hardwood, boards of all types.
- (22) Diamond saw blade for ceramics, tiles, slate.



8. PREPARING THE MINI PLUNGE SAW

NOTE: Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

WARNING: It is recommended that the cutting depth is set approximately 2mm deeper than the thickness of the material that is being cut. This should ensure a cleaner cut.

8.1 SETTING THE CUTTING DEPTH- FIG. 1

Release the locking lever of the cutting depth adjustment (7), set to the required cutting depth via the cutting depth gauge (4) and re-clamp the locking lever.

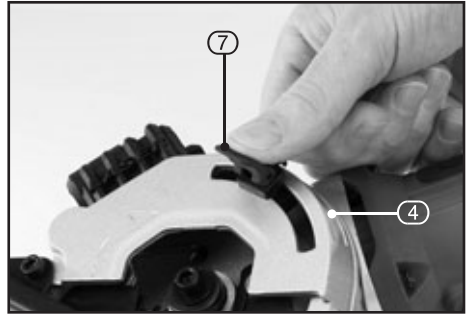


FIG.1

8.2 CHANGING THE SAW BLADE - FIGS. 2-4

WARNING: Incorrect positioning of the saw blade can permanently damage the mini plunge saw.

- Ensure the saw is unplugged from the mains supply.
- Press and hold the spindle lock button (11) (Fig.2) and release the saw blade locking flange bolt (7) by using the supplied hex. key (18) (turn clockwise to release). Remove the saw blade locking flange bolt (7) (Fig.3).
- Set the cutting depth to the maximum. (See "8.1-Setting the cutting depth").
- Release the plunge guard using the lock off lever and plunge the base plate (16) to expose the saw blade (Fig.4).
- Remove the saw blade.
- The installation of the blade is carried out in the reverse order.
- Press the spindle lock button (11) (until it engages) and tighten the saw blade locking flange bolt (7) securely.

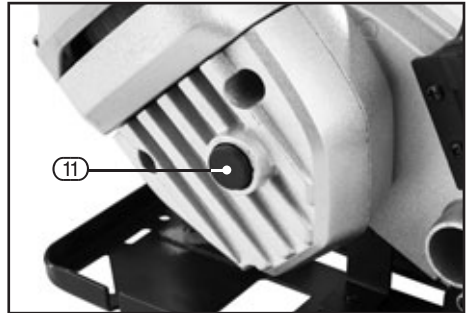


FIG.2

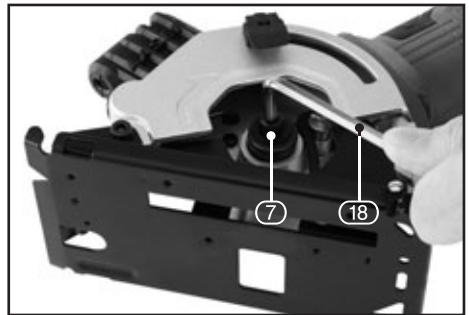


FIG.3

NOTE: The directional arrow on the saw blade must be the same with the arrow showing the direction of rotation (running direction shown on the tool).

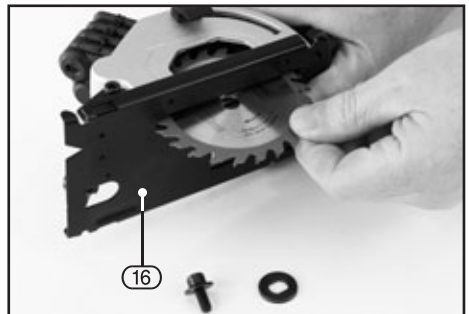


FIG.4

9. BASIC MINI PLUNGE SAW OPERATIONS

NOTE: Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

9.1 SWITCHING ON THE MINI PLUNGE SAW- FIGS. 5-6

WARNING: Before switching the machine on, check that the saw blade is properly fitted, operates efficiently and that the saw blade locking flange bolt (7) is securely tightened.

Push the lock-off lever (5) (Fig 5), depress On/Off switch trigger (4) (Fig 6) inwards and keep it pressed at the same time. If you now release the lock off lever the saw will continue to run but the guard will be locked allowing you to line up your cut before releasing the plunge guard again to commence cutting.

When you release the trigger, the main switch returns automatically to its initial position and will turn the machine off.

WARNING: The saw blade will continue to rotate for a few moments even after the saw has been switched off.

WARNING: Always cut in a forward direction **NEVER** draw the tool backwards.



FIG.5



FIG.6

9.2 RELEASING THE PLUNGE STOP - FIG. 7

Press the back of the lock-off button (5) down and hold.

NOTE: Pressing down the lock-off button (5) unlocks the plunge cutting mechanism so that the motor can be moved downwards.



FIG.7

9.3 SETTING THE PARALLEL GUIDE FENCE - FIG .8

Release the parallel guide locking screw (10) on the base plate (16) and set the guide fence into the guide fence slot (9). Set to the required width and retighten the parallel guide locking screw (10).

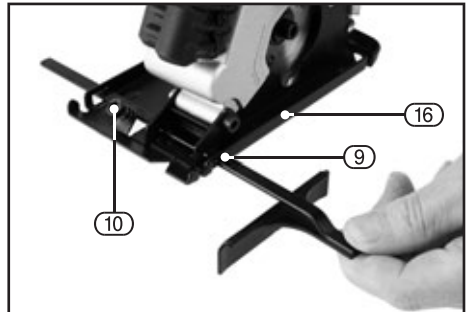


FIG.8

9. BASIC MINI PLUNGE SAW OPERATIONS

9.4 LASER LINE GENERATOR – FIG. 9

Warning! Laser radiation. Do not stare into beam.
Class 2 laser product.

The laser on/off switch (2) is located on top of the blade housing.

To turn on the laser, switch the on/off switch (2) to the “I” position, the laser beam will now operate.

To turn off the laser, press the on/off switch (2) to the “O” position.

To use the laser before making the cut;

- 1) Make sure the line of the cut is on the workpiece.
- 2) Adjust the depth of cut as required.
- 3) Plug the machine into the mains supply and switch it on.
- 4) Switch on the laser beam using the laser on/off switch (2).
- 5) When the saw blade is at the maximum speed (approx. 5 seconds), place the saw on the workpiece.
- 6) Align the beam with the mark on the workpiece and slowly plunge the saw blade into the work piece. Push the saw forward using both hands, keeping the red light beam on the mark. When the cut is finished, raise the saw and switch off.
- 7) Switch off the laser.

NOTE: Laser is powered by 2 x 1.5V LR44 button cells. Access to these, should they need to be replaced is achieved by removing the plastic laser housing after removing the screw that holds it in place.

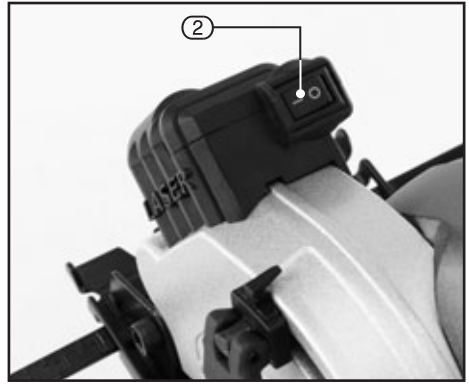


FIG.9

9.5 LINE FOLLOWING – FIG. 10

A V-shaped pointer is located at the front position of the base plate (16) to indicate where a line can be followed when cutting using the saw blade.

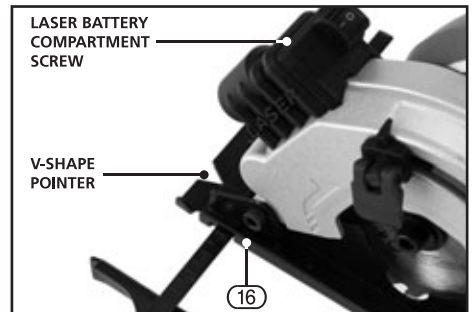


FIG.10

9. BASIC MINI PLUNGE SAW OPERATIONS

9.6 DUST EXTRACTION - FIG. 11

WARNING: As the mini plunge saw has a fully enclosed blade, forced dust extraction can be particularly important. Dust extraction should be used for all but small trimming jobs.

To connect the hose to the dust extraction outlet;

- 1) Push the connection hose (19) onto the dust extraction outlet (12).
- 2) Connect a vacuum device approved for the extraction of the material being cut to the connection hose.

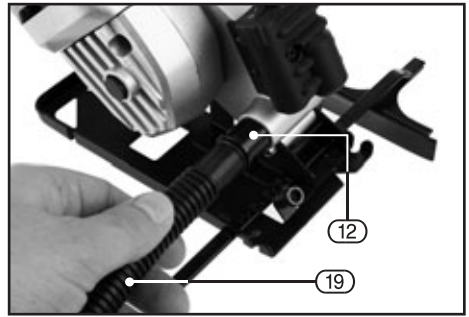


FIG.11

To attach the connection hose, disconnect the mini plunge saw from the mains supply. Press the connection hose end onto the dust extraction outlet (12) on the tool body. Press the other end of the hose onto the vacuum hose.

Ensure that the vacuum to be used is recommended for use with the mini plunge saw. Powered dust extraction is recommended when a lot of cutting is required as fewer stoppages are needed for cleaning the mini plunge saw and surrounding work area.

Powered dust extraction should always be used in the process of cutting hazardous materials i.e, hardwoods, MDF or ceramics.

NOTE: Wearing of a suitable mask is recommended.

NOTE: Only use a vacuum cleaner or dust extractor specifically designed for the job being done. Many extractors will accommodate wood dust extraction but not all will accommodate metal swarf and filings.

9. BASIC MINI PLUNGE SAW OPERATIONS

9.7 CUTTING- FIG. 12

WARNING: Before using the machine, check the plunge guard lock (13) is secured and can function correctly.

Always cut in a forward direction. Never draw the saw backwards. If you are unfamiliar with the functionality of the saw then test it first by cutting some thin wood until proficient.

- a) Check the specifications to ensure that the material to be cut is suitable.
- b) Fit the correct saw blade ensuring it is sharp, undamaged and fit for purpose.
- c) Set the depth of the cut (see page 13).
- d) Place the material to be cut onto a flat surface such as a workbench, table or floor. The material needs to be held firm in a fixed position.

WARNING: Be careful not to damage blade or supporting surface beneath material being cut.

- e) Plug the mini plunge saw into a mains supply and switch laser (1) on (if required) using the switch.
- f) Grip the tool firmly (see "switching on the mini plunge saw" page 14) and rest its base plate onto the surface of the material to be cut when plunge cutting. Make sure that the rear of the base plate overhangs the work surface being worked on. Do not plunge the saw blade into the material.
- g) Operate the lock off lever then turn on the tool and allow the blade to run up to speed. Then release the lock-off lever (5), check alignment of cut is still correct, then operate the lock off lever to release the plunge guard and plunge the blade into the material gently. Push the tool forwards along the line to be cut.
- h) Slight force should be used when guiding the tool along the cut line. Any excessive force will cause fatigue to the operator and wear to the blade and tool. Excessive force is also likely to cause the machine temperature cut-out to trip, resulting in the saw not being operational (until it cools down).
- i) Make sure that the base plate (16) is always held flat on top of the material that is being cut. This is particularly important at the start or finish of a cut or if thin strips are being cut where the base plate is not fully supported.
- j) Once the cut is finished, lift the tool from the work surface before switching off. If excessive dust is present after operation, keep the tool switched on for a few additional seconds to allow the dust to clear from within the tool via the dust extraction outlet (12).



FIG.12

9. BASIC MINI PLUNGE SAW OPERATIONS

9.8 CUT-OUTS- FIG. 13

NOTE: Plunge cutting may not be possible in some harder materials.

Always cut in a forward direction. Never draw the saw backwards. If you are unfamiliar with the functionality of the saw then test it first by cutting some thin wood until proficient.



FIG.13

- a) Firstly, choose the correct saw blade for appropriate material and set the depth of the cut. Plug into the mains supply and place the metal base plate (16) flat and level onto the work surface prior to cutting. Make sure that the front indication pointer on the base plate aligns with the start line of the cut (see page 15).
- b) Turn on the tool and allow the blade to run up to speed. When ready, plunge the saw blade into the material firmly but slowly. Push the saw forwards along the cut line (never draw the saw backwards during cutting).
- c) Once you have completed the cut along the cut line, lift the tool from the surface before turning it off. If there is a large amount of excess dust created, keep the saw switched on for a few extra seconds to allow the dust to clear from the saw.
- d) Cutting out tips;
 - If the cut is to be covered, i.e. by a vent cover, the corners can be overlapped to ensure that the waste material is completely detached.
 - If the cut is to be seen, do not overlap the corners. As the cutting blade is circular, the waste material will not be fully detached. The corners will require finishing with a knife. If the material is thin and the back surface unimportant, the waste material can just be pushed out.
 - Where there is access to the back surface of the material that is being cut, the cut out can be marked out with an over cutting allowance. The cut can then be made from the back surface thus ensuring perfect corners on the front surface.

NOTE: The blade depth of plunge, the thickness of the material being cut and the blade diameter need to be considered if accurate cutting is required. Never pull the saw backwards. Complete several practise cuts before attempting final cut.

9. BASIC MINI PLUNGE SAW OPERATIONS

9.9 CUTTING TOUGH OR ABRASIVE MATERIALS - FIGS. 14-16

WARNING: Never cut materials that produce toxic fumes or dust such as PTFE and asbestos.

NOTE: When cutting tougher materials such as metals, more force will be required to hold the workpiece and additional clamping may be required.

a) Sheet metal (HSS Blade).

Always set the depth adjustment to at least 1mm deeper than the actual material thickness to avoid the saw blade riding over the surface.

Remove burr and rust as this will hinder the feed across the material to be cut.

Polish applied to the base plate of the tool, or to the surface of material being cut, allows more efficient cutting.

The saw is only suitable for cutting brass, copper, lead, aluminium or mild steel (3mm max.).



FIG.14

b) Ceramic tiles, slates etc (Diamond Blade).

Only use a correct blade suitable for cutting this type of material.

Always use with a suitable vacuum cleaner or dust extractor connected to the tool as the dust can be hazardous to the user and prevent the guard operating correctly (8mm max.).



FIG.15

c) Wood (T.C.T. Blade).

Only use a correct blade suitable for cutting this type of material.

Always use with suitable vacuum cleaner or dust extractor connected to the tool as the dust can be hazardous to the user and prevent the guard from operating correctly.



FIG.16

10. MAINTENANCE AND TROUBLESHOOTING

10.1 MAINTENANCE

Regular inspection and cleaning reduces the necessity for maintenance operations and will keep your tool in good working condition.

The motor must be correctly ventilated during tool operation. Avoid blocking the air inlets and vacuum the ventilation slots regularly.

Blades

- Always use a sharp blade.
- If the saw does not cut as well as expected or overheats the most common cause is a blunt blade.
- It is difficult to tell whether a saw blade is blunt. If it isn't working efficiently then replace with a new blade.
- Blades are consumable items.
- Be cautious when changing a blade as it can become hot especially after usage. Before replacing the blade, allow it to cool.

10.2 TROUBLESHOOTING

Problem	Possible Cause	Remedy
Machine does not start.	1. Fuse.	1. Replace time delay fuse or reset circuit breaker.
	2. Brushes worn.	2. Have brushes replaced by an authorised service centre.
	3. Other.	3. Contact an authorised service centre.
Poor cutting performance.	1. Saw blade blunt.	1. Replace saw blade.
	2. Saw blade incorrectly mounted.	2. Remove & refit saw blade as per instructions.
	3. Incorrect saw blade selection.	3. Seek advice on suitable saw blades.
Saw vibrates.	1. Saw blade distorted.	1. Stop machine immediately & replace blade.
Laser doesn't work.	1. Batteries.	1. Replace batteries (2 x LR44).
	2. Other.	2. Check for damage, contact authorised service centre.

11. OPTIONAL ACCESSORIES

11.1 OPTIONAL ACCESSORIES

A full range of accessories are available from Draper Tools.

Please visit our website for details: www.drapertools.com

12. EXPLANATION OF SYMBOLS

12.1 EXPLANATION OF SYMBOLS



Read the instruction manual.



Wear face mask and safety glasses.



Wear ear defenders.



Wear protective gloves.



Do not abandon into the environment.



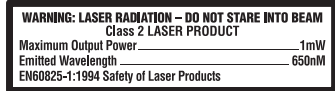
Keep out of the reach of children.



Warning!



Warning!
Laser product.



Single value noise marking.
(Maximum declared A-Weighted sound power level in decibels).



Class II construction
(Double insulated).



WEEE –
Waste Electrical & Electronic Equipment.
Do not dispose of Waste Electrical & Electronic Equipment in with domestic rubbish.



Lithium-ion product.

Li-ion



Do not incinerate or throw onto fire.



For indoor use only.
Do not expose to rain.



Short-circuit-proof safety isolating transformer.



Fuse.



Polarity indication.



Rated voltage.

13. DISPOSAL

13.1 DISPOSAL

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not dispose of WEEE* as unsorted municipal waste.



* *Waste Electrical & Electronic Equipment.*

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