MINI PLUNGE SAW 500W – 85MM
POWE30040

1 APPLICATION

This machine is primarily intended for the sawing, longitudinally and transversely, of solid wood, chipboard, plywood, aluminium, tiles and stone held in a fixed position. Please note that the blade pre-installed in the saw as supplied is intended for use with wood only. Any other use or modification to the device shall be considered as improper use and could give rise to considerable dangers. Not suitable for professional use.

WARNING! Read this manual and general safety instructions carefully before using the appliance, for your own safety. Your power tool should only be passed on together with these instructions.

2 OVERVIEW COMPONENTS (FIG. A)

1 Laser generator
2 Laser generator switch
3 Safety lock button for mechanical plunge stop
4 Cutting depth scale
5 ON/OFF switch
6 Cutting depth setting clamp with lock lever
7 Clamping screw with plain washer
8 Saw blade
9 Guide fence slot
10 Lock screw for guide fence
11 Removable protective cover
12 Dust adapter
13 Soft grip
14 Spindle lock button
15 Dust extraction nozzle
16 Base plate

3 PACKAGE CONTENT LIST

- Remove all packing materials.
- Remove remaining packaging and transit supports (if existing).
- Check the completeness of the packing content.
- Check the appliance, the power cord, the power plug and all accessories for transportation damages.
- Keep the packaging materials as far as possible till the end of the warranty period. Dispose it into your local waste disposal system afterwards.

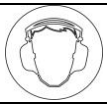
WARNING Packing materials are no toys! Children must not play with plastic bags! Danger of suffocation!

1 x mini plunge saw
1 x hex key
1 x parallel guide
1 x dust adaptor
1 x 20T blade (pre-fit on machine)
1 x manual
1 x diamond disc
1 x HSS blade

When parts are missing or damaged, please contact your dealer.

4 SYMBOLS

In this manual and/or on the machine the following symbols are used:

	Denotes risk of personal injury or damage to the tool.		Class II - The machine is double insulated; Earthing wire is therefore not necessary.
	Read the manual carefully before use.		Always wear safety goggles.
	In accordance with essential requirements of the European directive(s).		Wear a mask In dusty conditions.
	Wear noise protection.		Only use indoors.
	Laser radiation!		Do not stare into beam.

5 GENERAL POWER TOOL SAFETY WARNINGS

Read all safety warnings and all instructions. Failure to follow all warnings and instructions 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.

5.1 Work area

- Keep work area clean and well lit. Cluttered and dark areas invite accidents.
- 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 dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

5.2 Electrical safety

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

- 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.
- Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.

- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

5.3 Personal safety

- 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 inattention while operating power tools may result in serious personal injury.
- Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used whenever conditions require will reduce personal injuries.
- Avoid accidental starting. Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust related hazards.

5.4 Power tool use and care

- Do not force the power tool. 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.
- 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.
- Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- 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.
- Maintain power tools. Check for misalignment or sticking of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to stick and are easier to control.
- Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from intended could lead to a hazardous situation.

5.5 Service

- 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.

6 ADDITIONAL SAFETY INSTRUCTIONS FOR PLUNGE SAWS

- Make sure that the mains voltage matches the specifications on the type plate.
- Persons with restricted physical, sensory or mental capabilities are not allowed to use the plunge saw unless they are supervised and instructed by a guardian.
- Never leave the powered-on saw unattended and keep them out of reach of children and persons in need of supervision.
- Do not bring your hands in the cutting area and the saw blade.
- Keep in mind that even a worn saw blade is still very sharp. Always grasp the saw blade on the sides. Do not fling the saw blade and do not drop it.
- Never use the plunge saw with grinding wheels.
- Do not grip underneath the workpiece. The protective cover cannot protect you from the saw blade under the workpiece.
- Adjust the cutting depth to the thickness of the workpiece. It should be visible less than a full tooth height under the workpiece.
- Do not cut very small workpieces. When cutting round wood, use a device which secures the workpiece from twisting. Never hold the workpiece to be cut in your hand or across your leg. It is important to secure the workpiece properly to minimise the risk of physical contact, jamming of the saw blade or loss of control.
- Hold the saw only by the insulated gripping surfaces when performing an operation where the cutting tool may come into contact with hidden power lines or its own device cable. Contact with a live wire also exposes the metal parts to tension and leads to an electric shock.
- Use always saw blades in the correct size and with suitable locating bore. Saw blades that do not match the mounting parts of the saw will run unevenly and lead to loss of control.
- Never use a damaged or incorrect outer flange or a damaged clamping screw. The outer flange and the clamping screw have been specially designed for your saw for optimum performance and reliability.
- Start the plunge saw and begin cutting when it reaches the full idling speed.
- Never brake the saw blade using lateral pressure after switching it off.
- Set the saw aside only when the saw blade comes to a standstill.
- Do not expose the saw to high temperatures, humidity and strong shocks. The saw can be damaged as a result.
- Hold the saw firmly with both hands and bring your arms into a position in which you can resist the kickback forces

7 CAUSES AND PREVENTION OF KICKBACK

- A kickback is the sudden reaction as a result of a stuck, jammed or misaligned saw blade which leads to an uncontrolled saw to be lifted and moved from the workpiece out in the direction of the operator.
- A kickback can occur when the saw blade gets stuck or jammed in the saw gap. The saw blade is blocked and the motor force repels the plunge saw in the direction of the operator.
- A kickback can occur when the saw blade becomes twisted or misaligned in the saw groove. As a result, the teeth of the back edge of the saw blade can get stuck in the surface of the workpiece, whereby the saw blade is moved out of the saw gap and the saw jumps back in the direction of the operator.
- A kickback is the result of incorrect or faulty use of the saw. It can be prevented by appropriate precautions as described below.
- Hold the saw firmly with both hands and bring your arms into a position in which you can resist the kickback forces. Always hold the saw blades on the sides; never bring the blade in line with your body. In a kickback, the saw can jump backwards, but the operator can control the kickback forces if appropriate measures were taken.

- If the saw blade jams or sawing is interrupted for any reason, release the ON / OFF switch and calmly hold the saw in the material until the saw blade stands completely still. Never attempt to remove the saw from the workpiece or pull it backwards as long as the saw blade is moving or a kickback might occur. Find the cause of the saw blade jam and eliminate them through appropriate measures.
- When you want to restart a saw that is stuck in a workpiece, centre the saw blade in the saw gap and check that the saw teeth are not stuck in the workpiece. If the saw blade jams, it can move out from the workpiece or a kickback can happen if the saw is restarted.
- Prop up large panels in order to minimise the risk of a kickback by a jammed saw blade. Large panels tend to sag under their own weight. Panels must be supported on both sides, both in the vicinity of the saw gap as well as on the edge.
- Do not use dull or damaged saw blades. Saw blades with blunt or misaligned teeth cause increased friction, jamming of the saw blade and kickback by an excessively narrow saw gap.
- Tighten the cutting depth position prior to cutting. If the settings change while cutting, the saw blade can jam and a kickback can occur.
- Be especially careful if you perform a "circular cut" in a hidden area, such as an existing wall. The protruding saw blade can get blocked in hidden objects while cutting and cause a kickback.
- Do not place the saw on the workbench or the floor unless the saw blade is at a standstill. An unprotected, running saw blade moves the saw against the cutting direction and cuts whatever is in its way. Thus note the delay time of the saw.
- For this reason, the saw is not suitable for use in reverse position as fixed equipment.
- Do not operate the saw if it is not working properly or has been damaged. In case of technical problems, do not attempt to repair it on your own. Contact the service or have the saw repaired by a professional.

8 ADDITIONAL SAFETY INSTRUCTIONS FOR LASERS

Warning! The laser beam potentially causes eye damage. Do not look or stare into the laser beam.

- During use, do not point the laser beam at people, directly or indirectly through reflecting surfaces.
- This laser complies with class 2 according to the relevant standard. The unit includes no servicing components. Do not open the housing for any reason. If the unit is damaged, have the damage repaired by an authorized repair agent.
- Laser viewing glasses are not protective glasses against laser radiation.

9 ASSEMBLY

9.1 Setting the cutting depth (Fig. 1)

NOTE: If possible we recommend that the cutting depth is set approximately 2 mm deeper than the material thickness. This should help to ensure you achieve a clean cut.

Unclamp the lock lever of the cutting depth setting clamp (6), set the required cutting depth on the scale (4) and re-clamp the lock lever.

9.2 Changing a saw blade

WARNING: Incorrect positioning of the blade can permanently damage the tool.

- Ensure the tool is unplugged from the mains supply.
- Press and hold the spindle lock button (14) on, release the clamping screw with plain washer (7) by using the inner hexagon wrench (turn clockwise to open). Remove the clamping screw with plain washer (see **Fig. 2**, 3 and 4).
- Set the cutting depth to the maximum. (See “Setting the Cutting Depth” section)
- Lift up the base plate (16).
- Remove the saw blade.
- The installation of a saw blade is done in the reverse order.
- Press the spindle lock button (14) (until it engages) and tighten the clamping screw (7) firmly.

NOTE: The arrow on the saw blade must agree with the arrow showing the direction of rotation (running direction shown on the device).

10 OPERATION

10.1 Holding and switching ON/OFF

WARNING: Before engage the ON/OFF switch, check that the saw blade is properly fitted and runs smoothly, and that the blade clamp screw (7) is well tightened.

Connect the plug to the power supply.

10.1.1 Switching on the tool:

To switch on: Slide the ON/OFF switch (5) backwards and hold.
To switch off : Release the ON/OFF switch (5).

Warning: The saw blade continues to rotate after the tool is switched off.

Note: Carry out a trial cut in a piece of waste wood.

10.1.2 Releasing the plunge stop

Press the rear position of safety lock button (3) downwards and keep it pressed (refer to the direction of arrow ③ on Fig. 5).

NOTE: Pressing the safety lock button (3) unlocks the plunge cut mechanism at the same time, so that the motor can be moved downwards. The saw blade emerges from the removable protective cover (11).

10.2 Setting the guide fence

Release the lock screw for guide fence (10) on the base plate (16) and set the guide fence in the guide fence slot (9). Set a desired width and retighten the lock screw for the guide fence (10).

10.3 Laser line generator

Warnings: Do not stare directly at the laser beam, do not deliberately aim the beam at personnel and ensure that it is not directed towards the eye of a person for longer than 0.25 s.

When you make the line of the cut on the work piece, the laser line generator can help you get better alignment.

Your saw has a laser light which power is supplied by battery.
The laser generator switch (2) locates at the front of safety lock button for mechanical plunge stop (3).
Turn on: Press the laser generator switch (2) to “I” position, the laser generator (1) works.
Turn off: Press the switch (2) to “O” position again.

- Make sure line of the cut is on the work piece.
- Adjust the depth of cut as required.
- Plug in the machine and start the motor.
- When the blade is at its maximum speed (approximately 5 seconds), place the saw on the work-piece.
- Switch on the laser generator (1) from the laser aperture using the laser generator switch (2).
- Align the beam with the mark on the work-piece and slowly push the saw forward using both hands, keeping the red light beam on the mark.
- Switch off the laser beam when completion of the cut.
- When the battery power is run out, please change the battery by pull out the laser battery box cover.

10.4 Line following

A V-shaped pointer and pointer locate at the front and the rear position of the base plate (16) which allow a line to be followed, when cutting. (Refer to Fig. 6)

10.5 Dust extraction

The plunge saw is a powerful tool capable of producing a large amount of dust. As the tool has a fully enclosed blade, forced dust extraction is particularly efficient. Forced dust extraction should be used for all but small trimming jobs.

- Push the dust adaptor (12) on to the dust extraction nozzle (15).
- Connect a vacuum device approved for the extraction of sawdust and splinters to the dust adaptor (12).

11 CUTTING

WARNING! Before using the machine, need to check the function of removable protective cover (11) can be used properly.

WARNING: Always cut in a forward direction. Never draw the tool backwards. If you are a novice user, practice by cutting thin wood until proficient.

- Check the specifications to ensure the suitability of the material to be cut.
- Fit the correct blade ensuring it is sharp and not damaged.
- Set the depth of cut. (See “**Setting the cutting depth”** section)

- Place the material to be cut onto a flat surface such as a workbench, table or floor. Use a piece of scrap material underneath if:
- You do not wish to damage the work surface.
- The work surface is likely to damage the blade. E.g. a concrete floor.
- Plug into mains supply.
- Grasp the tool firmly (See "**Holding & switching ON/OFF"** section) and rest its metal base plate onto the surface to be cut. Ensure that the rear half of the base plate overhangs the work surface. Do not plunge the blade into the material.
- Switch on the tool and wait for a moment for the blade to run up to speed. Next, depress the safety lock button (3) and plunge the blade into the material slowly and gently, but firmly. Then push the tool forwards along the line to be cut. If necessary, switch on the laser generator (1).
- **NOTE:** Never draw the tool backwards.
- Very little force should be used to feed the tool along the cut. Excess force will cause operator fatigue and excessive wear to the blade and tool. Excess force is also likely to cause the temperature cut-out to trip, resulting in delays.
- Ensure that the base plate is always held flat on the material 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.
- Once the cut has been finished, lift the tool from the work surface before switching off. If a lot of dust has been created, keep switched on for a few seconds extra to allow the dust to clear from within the tool.

12 CUT-OUTS

Plunge cutting may not be possible in some hard materials.

- Choose a suitable saw blade for hard materials and change to it. Set the depth of cut (See "Setting the Cutting Depth" section), plug in the mains supply and then place the metal base plate (16) onto the work surface. Ensure that the front indication mark on the base plate aligns with the start line (See "Line Following" section).
- Switch on the tool and wait for a moment for the blade to run up to speed. Next, plunge the blade into the material slowly and gently, but firmly. Then push the tool forwards along the line to be cut. (Never draw the tool backwards)
- Once the finish line has been reached, lift the tool from the work surface before switching off. If a lot of dust has been created, keep switched on for a few seconds extra to allow the dust to clear from within the tool.
- Cutting out tips:
- If the cut is to be covered, for example by a vent cover, the corners can be overlapped to ensure that the waste material is completely detached.
- If the cut out is to be seen, do not overlap the corners. In this circumstance, as the cutting blade is circular, the waste material will not be fully detached. The corners will therefore, 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 to be cut, the cut out can be marked out with an over cutting allowance. The cut is then made from the back surface to ensure perfect corners on the front surface.

13 CUTTING PARTICULARLY TOUGH OR ABRASIVE MATERIALS

Learn to use the tool by cutting wood before attempting to cut anything tougher. When cutting tougher material, such as metals, more force is required to hold the work piece and clamping may be required.
Never cut materials that produce toxic dust or fumes such as PTFE or asbestos.

13.1 Sheet metal:

- Always set the depth adjustment to at least 1 mm deeper than the material thickness to avoid the blade riding up over the surface. Scrap material is required underneath the work surface.
- Remove burrs and rust as these impede the feed across the material.
- Thick beeswax (furniture polish) applied to the base plate of the tool makes metal cutting easier.
- Only suitable for cutting brass, copper, lead, aluminium or galvanised mild steel.
- Every 2 minutes of metal cutting should be followed by a rest of at least 3 minutes.

13.2 Ceramic tiles, slates etc.:

- Only use a blade specifically designed for this purpose.
- Always use with a suitable vacuum cleaner or dust extractor connected as the dust can be hazardous to the operator and prevent the guard operating correctly.

13.3 Plasterboard:

- The plunge saw is only recommended for making occasional cut outs in plasterboard and always us it with a suitable vacuum cleaner or dust extractor connected. The dust can prevent the guard operating correctly.
- Conventional tools such as keyhole saws or knives generally give excellent results, though the plunge saw can be used if a particularly neat, dust free cut is required or if there is a danger of cutting pipes or cables.

14 CLEANING AND MAINTENANCE

Regular cleaning is required for the safe operation of the tool, as an excessive build-up of dust will prevent the tool from operating correctly.
The dust extraction hose may block and require cleaning occasionally, especially if damp wood is being cut.

- Unplug from mains supply.
- Clean thoroughly with a small soft brush, like a paint brush.
- Keep the cooling vents on the motor housing clean and unobstructed at all times.
- Never use any caustic agents or solvents to clean the plastic parts.

14.1 Blades

- Always use a sharp blade.
- If the tool does not cut as well as expected or if it overheats (temperature cut out may trip) the most common cause is a blunt blade.
- It is difficult to see or feel if the blade is blunt. When in doubt use a new blade.
- Blades are consumable items.
- Beware when changing blades as they can become hot during use. Allow the blade some time to cool before replacing it.

15 TECHNICAL DATA

Rated voltage	**230-240 V**
Rated frequency	50 Hz
Rated power	500 W
Rotation speed	7000 min^{-1}
Blade size	Ø 85 mm
Max. cutting depth soft wood	25 mm
Max. cutting depth steel	3 mm
Max. cutting depth plastic	5 mm
Carbon brush motor	Yes
Battery laser	Yes
Bore size	10 mm
Number of teeth	20T
Blade dimensions	85x1.6 mm
BMC	Yes
Soft grip	Yes
Safety guard	Yes
Base material	Alu
Overload protection function	Yes

16 NOISE

Noise emission values measured according to relevant standard. (K=3)

Acoustic pressure level LpA	94 dB(A)
Acoustic power level LwA	105 dB(A)

ATTENTION! Wear hearing protection when sound pressure is over 85 dB(A).

aw (Vibration):	2.9 m/s^2	K = 1.5 m/s^2

17 WARRANTY

- This product is warranted as provided by law for a 24 -month period effective from the date of purchase by the first user.
- This warranty covers all material or production flaws excluding: batteries, chargers, defective parts subject to normal wear & tear such as bearings, brushes, cables, and plugs, or accessories such as drills, drill bits, saw blades, etc. ; damage or defects resulting from maltreatment, accidents or alterations; nor the cost of transportation.
- Damage and/or defects resulting from inappropriate use also do not fall under the warranty provisions.
- We also disclaim all liability for any bodily injury resulting from inappropriate use of the tool.
- Repairs may only be carried out by an authorised customer service centre for Powerplus tools.
- You can always obtain more information at the number 00 32 3 292 92 90.
- Any transportation costs shall always be borne by the customer, unless agreed otherwise in writing.

- At the same time, no claim can be made on the warranty if the damage of the device is the result of negligent maintenance or overload.
- Definitely excluded from the warranty is damage resulting from fluid permeation, excessive dust penetration, intentional damage (on purpose or by gross carelessness), inappropriate usage (use for purposes for which the device is not suitable), incompetent usage (e.g. not following the instructions given in the manual), inexpert assembly, lightning strike, erroneus net voltage. This list is not exhaustive.
- Acceptance of claims under warranty can never lead to the prolongation of the warranty period nor commencement of a new warranty period in case of a device replacement.
- Devices or parts which are replaced under the warranty therefore remain the property of Varo NV.
- We reserve the right to reject a claim whenever the purchase cannot be verified or when it is clear that the product has not been properly maintained. (Clean ventilation slots, carbon brushes serviced regularly, etc.).
- Your purchase receipt must be kept as proof of date of purchase.
- Your appliance must be returned undismantled to your dealer in an acceptably clean state, (in its original blow-moulded case if applicable to the unit), accompanied by proof of purchase.

18 ENVIRONMENT

Should your appliance need replacement after extended use, do not discard it with the household rubbish but dispose of it in an environmentally safe way. Waste produced by electrical machine items should not be handled like normal household rubbish. Please recycle where recycle facilities exist. Check with your Local Authority or retailer for recycling advice.

19 DECLARATION OF CONFORMITY

VARO N.V. - Joseph Van Instraat 9 - BE2500 Lier - BELGIUM, declares that,

product	mini plunge saw 500W – 85mm
trade mark	PowerPlus
model	POWE30040

is in conformity with the essential requirements and other relevant provisions of the applicable European Directives, based on the application of European harmonized standards. Any unauthorized modification of the apparatus voids this declaration.

European Directives (including, if applicable, their amendments up to the date of signature);

2014/30/EU
2006/42/EC
2011/65/EU

European harmonized standards (including, if applicable, their amendments up to the date of signature);

EN60745-1 : 2009
EN60745-2-5 : 2010
EN60745-2-22 : 2011
EN55014-1 : 2006
EN55014-2 : 2015
EN61000-3-2 : 2014
EN61000-3-3 : 2013

Keeper of the Technical Documentation : Philippe Vankerkhove, VARO – Vic. Van Rompuy N.V.

The undersigned acts on behalf of the company CEO,

Hugo Cuypers
Regulatory Affairs – Compliance Manager
23/02/17