

**PROXXON**

**GG 12**



**Manual**

# PROXXON

## GG 12 Set

Dear Customer,

Before putting the machine into operation, read the enclosed safety rules and operating instructions.

Table of content:

General safety instructions . . . . .	2
Specific Safety Rules for Rotary Tools . . . . .	3
Functional Description . . . . .	4
Scope of delivery . . . . .	4
Technical data . . . . .	5
Working with the tool . . . . .	5
Operating speed for the supplied accessories . . . . .	5
Maintenance . . . . .	5

### General safety instructions

Warning! Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

### Save these instructions!

#### Work Area

Keep your work area clean and well lit. Cluttered benches 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 bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

#### Electrical Safety

Double Insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation eliminates the need for the three wire grounded power cord and grounded power supply system.

Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is 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 to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.

When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W." These cords are rated for outdoor use and reduce the risk of electric shock.

#### Personal Safety

Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.

Avoid accidental starting. Be sure switch is off before plugging in. Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.

Remove adjusting keys or wrenches before turning the tool on. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.

Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.

Use safety equipment. Always wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

#### Tool Use and Care

Use clamps or other practical way to secure and support the work piece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.

Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.

Do not use tool if switch does not turn it on or off. Any 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 the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.

Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.

Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.

Use only accessories that are recommended by the manufacturer for your model.

Accessories that may be suitable for one tool, may become hazardous when used on another tool.

## **SERVICE**

Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.

When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury. Certain cleaning agents such as gasoline, carbon tetrachloride, ammonia etc. may damage plastic parts.

## **Specific Safety Rules for Rotary Tools**

Hold 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 make exposed metal parts of the tool "live" and shock the operator. If cutting into existing walls or other blind areas where electrical wiring may exist is unavoidable, disconnect all fuses or circuit breakers feeding this worksite.

Accessories must be rated for at least the speed recommended on the tool warning label. Wheels and other accessories running over rated speed can fly apart and cause injury.

Always disconnect the power cord from the power source before making any adjustments or attaching any accessories. You may unexpectedly cause tool to start leading to serious personal injury.

Be aware of the switch location, when placing the tool down or when picking the tool up. You may accidentally activate the switch.

Always wear safety goggles and dust mask. Use the tool only in ventilated area. Using personal safety devices and working in safe environment reduces risk of injury.

After changing the bits or making any adjustments, make sure the collet nut and any other adjustment devices are securely tightened. Loose adjustment device can unexpectedly shift, causing loss of control, loose rotating components will be violently thrown.

Do not reach in the area of the spinning bit. The proximity of the spinning bit to your hand may not always be obvious.

Allow brushes to run at operating speed for at least one minute before using wheel. During this time no one is to stand in front or in line with the brush. Loose bristles or wires will be discharged during the run in time.

Wire and bristle brushes must never be operated at speeds greater than 15,000/min. Direct the discharge of the spinning wire brush away from you. Small particles and tiny wire fragments may be discharged at high velocity during the "cleaning" action with these brushes and may become embedded in your skin. Bristles or wires will be discharged from the brush at high speeds.

Carefully handle both the tool and individual grinding wheels to avoid chipping or tracking. Install a new wheel if tool is dropped while grinding. Do not use a wheel that may be damaged. Fragments from a wheel that bursts during operation will fly away at great velocity possibly striking you or bystanders.

Never use dull or damaged bits. Sharp bits must be handled with care. Damaged bits can snap during use. Dull bits require more force to push the tool, possibly causing the bit to break.

Use clamps to support work piece whenever practical. Never hold a small work piece in one hand and the tool in the other hand while in use. Allow for sufficient space between your hand and the spinning bit. Round material such as dowel rods, pipes or tubing have a tendency to roll while being cut, and may cause the bit to "bite" or jump toward you. Clamping a small work piece allows you to use both hands to control the tool.

Inspect your work piece before cutting. When cutting irregularly shaped work pieces, plan your work so it will not slip and pinch the bit and be torn from your hand. For example, if carving wood, make sure there are no nails or foreign objects in the work piece. Nails or foreign objects can cause the bit to jump.

Never start the tool when the bit is engaged in the material. The bit cutting edge may grab the material causing loss of control of the cutter.

Avoid bouncing and snagging the wheel, especially when working corners, sharp edges etc. This can cause loss of control and kick-back.

The direction of feed with the bit into the material when carving, routing or cutting is very important. Always feed the bit into the material in the same direction as the cutting edge is exiting from the material (which is the same direction as the chips are thrown). Feeding the tool in the wrong direction, causes the cutting edge of the bit to climb out of the work and pull the tool in the direction of this feed.

If the work piece or bit becomes jammed or bogged down, turn the tool off by the switch. Wait for all moving parts to stop and unplug the tool, then work to free the jammed material. If the switch of the tool is left on, the tool could restart unexpectedly causing serious personal injury.

Do not leave a running tool unattended, turn power off. Only when tool comes to a complete stop it is safe to put it down.

Do not grind or sand near flammable materials. Sparks from the wheel could ignite these materials.

Do not touch the bit or collet after use. After use the bit and collet are too hot to be touched by bare hands.

Regularly clean the tool's air vents by compressed air. Excessive accumulation of powdered metal inside the motor housing may cause electrical failures.

Do not allow familiarity gained from frequent use of your rotary tool to become commonplace. Always remember that a careless fraction of a second is sufficient to inflict severe injury.

Do not alter or misuse tool. Any alteration or modification is a misuse and may result in serious personal injury.

This product is not intended for use as a dental drill or in medical applications. Serious personal injury may result.

When using steel saws, cut off wheels, high speed cutters or tungsten carbide cutters, always have the work securely clamped. Never attempt to hold the work with one hand while using any of these accessories. The reason is that these wheels will grab if they become slightly canted in the groove, and can kick-back causing loss of control resulting in serious injury. Your second hand should be used to steady and guide the hand holding the tool. When a cut off wheel grabs, the wheel itself usually breaks. When the steel saw, high speed cutters or tungsten carbide cutters grab, it may jump from the groove and you could lose control of the tool.

#### WARNING:

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products, and

- arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Use a vacuum cleaner for wood dust collection as described in our manual whenever possible.

#### Please also read the following carefully:

PROXXON does not accept liability for damage that occurs if:

1. the tool is handled in a manner which constitutes improper use
2. it is used for purposes which are not specified in the instruction manual
3. the safety regulations are not observed

#### Warranty claims are invalid if:

1. the tool is operated incorrectly
2. the tool is used improperly
3. modifications or interventions are made on the tool
  - Do not leave the tool switched on.
  - Only allow children to operate it under the supervision of adults.
  - Wear protective goggles.
  - Secure small work pieces so that they are secure and stable.
  - Keep the working area tidy.
  - Do not overload the tool.
  - Store tools safely.

#### Functional Description:

Engraving glass, acrylic and ceramic (and also steel) is an enjoyable hobby. Congratulations on purchasing the appropriate tool for this hobby. This is a precision tool that will make this pastime a particular pleasure. You will be satisfied with the result of your work after just a little practice.

#### Scope of delivery


- 1 engraving tool GG 12
- 1 voltage supply unit, model SNG
- 1 ball-shaped abrasive diamond pencil 1.0 mm
- 1 ball-shaped abrasive diamond pencil 0.8 mm
- 1 conical silicon-carbide abrasive pencil
- 1 bullet-shaped silicon-carbide abrasive pencil
- 1 piece of glass for experimenting
- 1 robust case

**Note:**

Only operate the GG 12 with the voltage supply unit provided or other PROXXON voltage supply units (NG 2/E or NG 5/E).


**Technical data:**

- Permanently excited DC motor for 12 - 18 volt
- Power rating: max. 25 watt
- Nominal current consumption: 0.5 A
- Ball bearings
- Radial fan for forced cooling
- Idle speed: 20,000 rpm
- Micro-switch (button) in handle
- Housing made of glass-fibre-reinforced polyamide
- Power lead (helix cable) with non-interchangeable plug, approx. 100 cm long

Isolating transformer 

Only for indoor use 

Fuse 

Double insulation 

Important: Only for bits with 2.35 mm (3/32")-shaft!

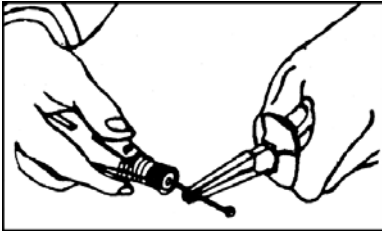


Fig. 1

Clamp shaft with pliers and insert into the mount to the stop (see Fig. 1).

Never overload the tool by pressing too hard. Always remember that power is provided by the rotational speed and not the contact pressure.

**Working with the tool:**

Switch on the tool and hold like a pen with a gentle grip. Rest the lower half of your arm on the table or against your body. After some practice, we recommend that you work with templates (available in shops). Simply adhere these to the rear of the glass with adhesive tape. Always make the outline first. Use the diamond abrasive pencils to do this. Then create matt surfaces with the silicon-carbide pencils.

**Warning:**

While working dangerous dust can be emitted! Never work without wearing goggles and dust mask.

**Always remember:**

Practice makes perfect. At the beginning, use simple types of glass (panes or cylindrical glass). Use dark materials underneath to give a better contrast.

Operating speed for the supplied accessories:

The following table shows you the recommended speed for different accessories, supplied from PROXXON.

Only use accessories and spare parts recommended by PROXXON (Observe the max. permitted rotational speed).

	recommended speed	maximum speed
Carborundum grinding bits	20.000rpm	100.000rpm
Diamond grinding bits	20.000rpm	300.000rpm

**Warning!**

Never use brass brushes !

**Maintenance**

**Warning!**

Disconnect the plug from the mains before performing any maintenance or cleaning work.

After use

Clean the unit thoroughly, removing all grinding dust with a brush or a soft cloth. Ensure all ventilation slots are free from obstruction. Do not allow brake fluids, gasoline, or penetrating oils to come in contact with the plastic parts. They contain chemicals that can damage or destroy plastics!

Always follow the instructions of the manual!

Any attempt to repair or replace electrical parts on this tool may create a hazard unless repair is done by a qualified service technician.

Repair services available at your PROXXON service center (You find the address at the back of this manual).