

TERRATEK

234 pcs Rotary Tool Kit

TMT234-2

User Manual

Please read and
retain for future
reference



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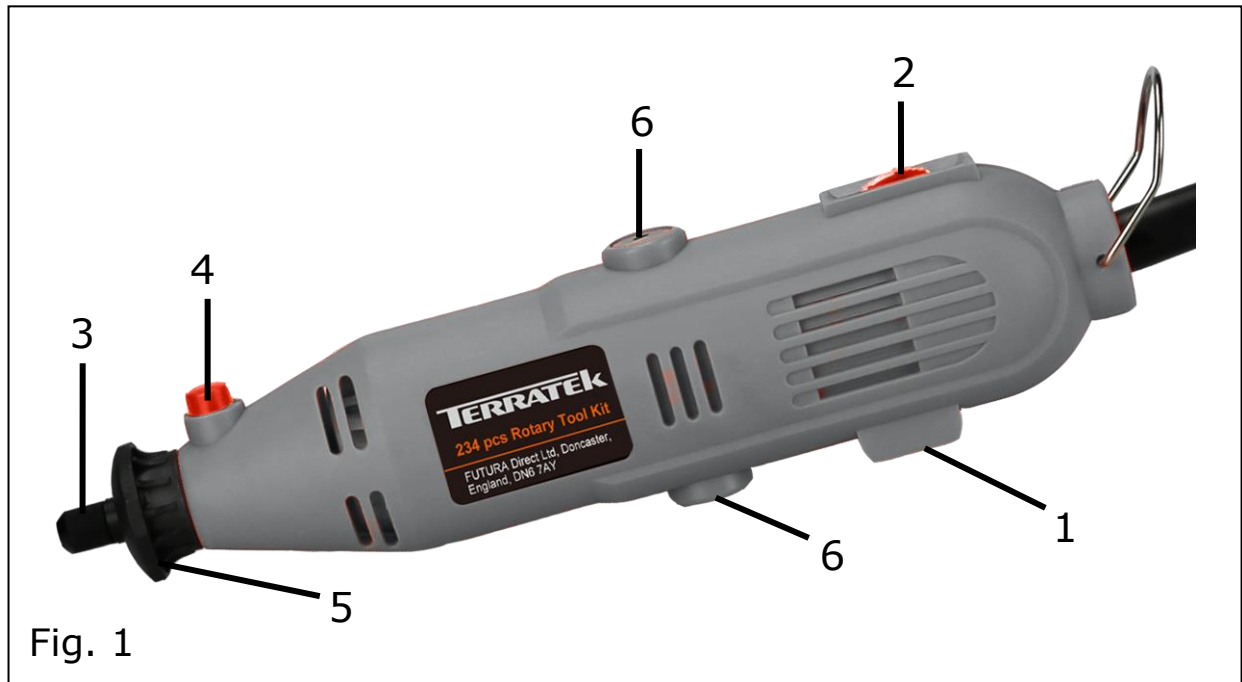


234 pcs Rotary Tool Kit TMT234-2

Thank you for purchasing our 234 pcs Rotary Tool Kit which has been designed to give many years of service under normal use. In order to get the most from your 234 pcs Rotary Tool Kit please carefully read and follow the instruction provided.

CONTENTS

- Overview**
- Technical Information**
- Safety Instructions**
- Using your Unit**
- Care and Maintenance**
- Warranty**



OVERVIEW (Fig. 1)

1. On/Off Switch
2. Speed controller
3. Collet Chuck Nut
4. Locking knob for collet chuck
5. Cover
6. Carbon Brush Cover



Fig. 2

Accessories List

| No. | Description | Quantity |
|-----|--|----------|
| 1 | Collets : 2 x 1.6, 2.3 and 3.2mm | 6 |
| 2 | Cut Off Wheels Fiberglass: 1 1/4" x 3/64" | 5 |
| 3 | Diamond Engraving Cutters | 7 |
| 4 | Fabric Tips & Wheels | 7 |
| 5 | Sand Papers: 180grit, 200grit, 240grit | 96 |
| 6 | Sanding Bands: 1/4" x 1/2" - 4pcs; 1/2" x 1/2" - 4pcs; | 8 |
| 7 | Screw Mandrel | 1 |
| 8 | Mandrels | 2 |
| 9 | Brushes | 5 |
| 10 | Drill Bits | 3 |
| 11 | Grinding with shank Wheels | 10 |
| 12 | Grinding Wheel | 12 |
| 13 | High Speed Cutters | 2 |
| 14 | Rubber Emery Wheels | 2 |
| 15 | Saw Blade | 1 |
| 16 | Sanding Drums | 2 |
| 17 | Cutting Disc | 60 |
| 18 | Dressing Stones | 2 |
| 19 | Polishing Compound | 1 |
| 20 | Spanner | 1 |
| 21 | Plastic Box | 1 |

TECHNICAL INFORMATION**Rotary Mini Grinder****Model: TMT234-2**

Rated Voltage: 230-240V~ 50Hz

Rated Power: 135W

Idle Speed: 8000 – 33000 /min

Spindle Thread: M8

Chuck Capacity: Ø 1.6, Ø 2.3 and Ø 3.2mm

Attachment Max. Diameter: Ø35mm

N.W./ G.W.: 0.7/ 1.3 kg



Protection category II

Danger!

Sound and vibration

Sound and vibration values were measured in accordance with EN 60745.

L_{pA} sound pressure level: 68 dB(A)

K_{pA} uncertainty: 3 dB

L_{WA} sound power level: 79 dB(A)

K_{WA} uncertainty: 3 dB

Wear ear-muffs.

The impact of noise can cause damage to hearing.

Total vibration values (vector sum of three directions) determined in accordance with EN 60745.

Vibration emission value $a_h < 2.5 \text{ m/s}^2$

K uncertainty = 1.5 m/s^2

The specified vibration value was established in accordance with a standardized testing method. It may change according to how the electric equipment is used and may exceed the specified value in exceptional circumstances.

The specified vibration value can be used to compare the equipment with other electric power tools.

The specified vibration value can be used for initial assessment of a harmful effect.

Keep the noise emissions and vibrations to a minimum.

1. Only use appliances which are in perfect working order.
2. Service and clean the appliance regularly.
3. Adapt your working style to suit the appliance.
4. Do not overload the appliance.
5. Have the appliance serviced whenever necessary.
6. Switch the appliance off when it is not in use.
7. Wear protective gloves.

Caution!

Residual risks

Even if you use this electric power tool in accordance with instructions, certain residual risks cannot be ruled out. The following hazards may arise in connection with the equipment's construction and layout:

1. Lung damage if no suitable protective dust mask is used.
2. Damage to hearing if no suitable ear protection is used.
3. Health damage caused by hand-arm vibrations if the equipment is used over a pro-longed period or is not properly guided and maintained.

SAFETY INSTRUCTIONS



WARNING: Read all safety warnings and all instructions. Failure to follow the 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.

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

2) 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 electric shock if your body is earthed or grounded.
- 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 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.
- e) 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.
- f) 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.

3) 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 inattention while operating power tools may result in serious personal injury.
- b) Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for



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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 energizing power tools that have the switch on invites accidents.
- d) 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.
- 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 your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.

4) Power tool use and care

- a) 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.
- 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 the battery pack 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. Check for misalignment or binding 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.
- 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.

5) Service

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

- b) **Caution!**

If the replacement of the supply cord is necessary, this has to be done by the manufacturer



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or his agent in order to avoid a safety hazard.

SPECIAL SAFETY WARNING

Read this owner's manual completely and make sure you understand all of its safety guidelines.

1. KEEP GUARDS IN PLACE and in working order.
2. REMOVE ADJUSTING KEYS & WRENCHES. Before turning on the power tool, make sure the keys and adjusting wrenches have been removed.
3. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
4. ALWAYS REMAIN ALERT WHEN THE TOOL IS IN USE. Inattention on the part of the operator may lead to serious injury.
5. DON'T USE IN A DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lit.
6. KEEP CHILDREN AWAY. All visitors should remain at a safe distance from work area.
7. MAKE WORKSHOP CHILD-PROOF with padlocks, master switches or by removing starter keys.
8. USE THE RIGHT TOOL. Don't force a tool or attachment to do a job for which it was not designed.
9. USE THE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
10. DON'T FORCE THE TOOL. It has been designed to operate at maximum safety and performance levels.
11. DO NOT FORCE THE MATERIAL BEING CUT. Always let the tool cut at its own speed.
12. WEAR PROPER APPAREL. Do not wear loose clothing, neckties, rings, bracelets or other jewelry which may get caught in moving parts. Non-slip foot wear is recommended. Wear protective hair covering if you have long hair.
13. ALWAYS USE SAFETY GLASSES. Also use face or dust mask for commercial cutting operations. Everyday eyeglasses only have impact-resistant lenses, they are NOT safety glasses.
14. SECURE WORK. Use clamps or a vise instead of your hand to hold work when practical. This safety precaution allows for proper tool operation using both hands.
15. DON'T OVERREACH. Keep proper footing and balance at all times.
16. MAINTAIN TOOLS WITH CARE. Keep tools clean and in good working condition for maximum safety performance. Follow instructions for lubricating and changing accessories.
17. DISCONNECT TOOLS BEFORE SERVICING – when changing accessories, such as blades, bits, cutters, etc.
18. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in OFF position before plugging in.



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19. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may increase risk of injury.
20. MAKE SURE YOU USE THE CORRECT TOOL for the job you are doing.
21. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
22. CHECK DAMAGED PARTS. Before further use of the tool, damaged part(s), (i.e., guard) should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other condition that may affect the tools operation. A guard or other part that is damaged should be properly repaired or replaced.
23. Replace damaged blades/cutters immediately. DO NOT USE DAMAGED BLADES/CUTTERS. They may cause bodily injury.
24. DIRECTION OF FEED. Feed work into the blade/cutter against the direction of rotation of the blade/cutter only.
25. DO NOT ALTER THE PLUG.
26. NEVER LEAVE TOOL RUNNING UNATTENDED. Turn power off. Don't leave tool until it comes to a complete stop.
27. Double Insulation eliminates the need for the three wire grounded power cord and grounded power supply system.

This power tool is supplied with all the relevant safety guards and features, it should be checked before every operation, and this manual should be read and kept in a safe place. Whilst we warn of all the possible risks attached to using power tools any operator must have read and understood the manual and apply their own caution and common sense when using this power tool.

Following this guide will greatly reduce your risk of electric shock or injury.

Only use qualified repair agents to service this power tool.

Only use qualified electrician to repair any damaged wiring.

NEVER remove the grounding prong from the power tool or extension cord.

Additional safety Instructions for Rotary Mini grinder

1. Hold power tools by insulated gripping surfaces when performing an operation where the cutting tools may contact hidden wiring. Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator. Do not drill, fasten or break into existing walls or other blind areas where electrical wiring may exist. If this situation is unavoidable, disconnect all fuses or circuit breakers feeding this worksite.
2. Use a metal detector to determine if there are gas or water pipes hidden in the work area or call the local utility company for assistance before beginning the operation. Striking or cutting into a gas line will result in explosion. Water entering an electrical device may cause electrocution.



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3. Always hold the tool firmly with both hands for maximum control. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
4. Keep hands away from cutting area.
5. Do not use dull or damaged cutters.
6. 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.
7. Do not operate the flexible shaft with a sharp bend. Over bending the shaft can generate excessive heat on the jacket or hand piece. The recommended minimum is 5" radius.
8. Never work in area which is soaked with a liquid, such as a solvent or water, or dampened such as newly applied wallpaper. There is an electrical shock hazard when working in such conditions with a power tool and heating of the liquid caused by scraping action may cause harmful vapors to be emitted from work piece.
9. Always wear eye protection and a dust mask for dusty applications and when sanding. Sanding particles can be absorbed by your eyes and inhaled easily and may cause health complications.
10. Use special precautions when sanding chemically pressure treated lumber, paint that may be lead based, or any other materials that may contain carcinogens. A suitable breathing respirator and protective clothing must be worn by all persons entering the work area. Work area should be sealed by plastic sheeting and persons not protected should be kept out until work area is thoroughly cleaned.
11. Always wait until the machine has come to a complete stop before placing it down.
12. Before any work on the machine (e. g., maintenance, tool change, etc.) as well as during transport and storage make sure the switch is off. Unintentional actuation of the On/Off switch can lead to injuries.
13. After changing the bits or making any adjustments, make sure the collet nut and nose cap are both securely tightened. Loose adjustment devices can unexpectedly shift, causing loss of control, loose rotating components will be violently thrown.
14. Do not reach in the area of the spinning bit. The proximity of the spinning bit to your hand may not always be obvious.
15. Allow brushes to run at operating speed for at least one minute before using wheel.
16. 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.
17. 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 imbedded in your skin. Bristles or wires will be discharged from the brush at high speeds.
18. Carefully handle both the tool and individual grinding wheels to avoid chipping or cracking. 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



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velocity possibly striking you or bystanders.

19. Use clamps to support workpiece whenever practical. Never hold a small workpiece in one hand and the tool in the other hand while in use. Allow for sufficient space, at least 6", 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 workpiece allows you to use both hands to control the tool.

20. Inspect your workpiece before cutting. When cutting irregularly shaped workpieces, 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 workpiece. Nails or foreign objects can cause the bit to jump.

21. Never start the tool when the bit is engaged in the material.

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

22. 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.

23. If the workpiece 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 to the tool is left "ON" the tool could restart unexpectedly causing serious personal injury.

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

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

26. Check any parts concerned. Clean such parts or replace them, if required.

27. When using the 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 cutoff wheel grabs, the wheel itself usually breaks. When the steel saw, high speed cutters or tungsten carbide cutter grab, it may jump from the groove and you could lose control of the tool.

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

WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known 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.

Symbols

IMPORTANT: Some of the following symbols may be used on your tool.

V.....volts

A.....amperes

Hz.....hertz

~.....alternating current

.../m.....revolutions per minute

class II construction (double insulated)

Kg.....kilograms

n_0No load speed

CEConforms to European Harmonized New Approach Directives

DCDirect Current

Unpacking

Carefully remove the product and any accessories from the box. Make sure that all items listed in the packing list are included.

Package contents

A) Grinder

B) 234 piece accessory kit

C) User manual

Functional Description (Fig.1)

WARNING: Unplug from outlet before making adjustments or changing accessories. Such preventive safety measures reduce the risk of starting the tool accidentally.

Application

This rotary tool can be used for drilling, grinding, sanding and polishing, as well as engraving, cutting and removing rust in tight spaces or inaccessible places. The tool can be used on most metals, glass, wood and ceramics. For best performance and results keep the speed as even as possible without exercising too much pressure. As a guideline, use the tool at low speed for all large accessories, such as polishing for example, and at high speed for smaller accessories such as those used for engraving. For grinding and engraving, hold the tool as if it were a pen.

USING YOUR TOOL

CAUTION! Always be sure that the tool is switched off before assembly or adjustments

Installing and Removing Accessories

Always switch the tool off first and unplug. Hold the locking button at the front of the tool down and undo the collet chuck (anti-clockwise). Insert the collet that matches the shaft size of the accessory to be used. Place the collet nut over the collet and then insert the accessory shaft into the collet chuck ensuring maximum shaft contact then tighten up the collet nut. (DO NOT USE PLIERS).

Switching On/Off

The tool is switched "ON" by the slide switch located on the motor housing. TO TURN THE TOOL "ON" slide the switch button forward.

TO TURN THE TOOL "OFF" slide the switch button backward.

Warning! Hold the tool with both hands while starting the tool, since torque from the motor can cause the tool to twist.

Variable speed control dial

This tool is equipped with a variable speed control dial, adjustment from 8000 to 33000 rpm.

CARE AND MAINTENANCE

Always pull out the mains power plug before starting any cleaning work.

1. Keep the air vents free from obstruction and clean regularly.
2. Check regularly for any dust particles entering the grills around the motor and the switch. Use a soft brush to remove any dust particles. Wear safety glasses to protect your eyes whilst cleaning.
3. Monitor the dust bag (if equipped) and empty when approximately half full. Always empty into an appropriate container. REMEMBER: dust can be hot and cause fire.
4. If the cutting tool has become dull, replace it. Dull cutters will cause increased tear-out and ragged edges on the cuts.
5. Lubricate all moving parts at regular intervals.
6. To clean the body of the power tool, only use a soft damp cloth. Do NOT immerse in water. A mild detergent can be used but NOT petrol or any alcohol based product.
7. Should the power cord become damaged only allow a fully qualified electrician to

replace or repair.

Storing

Store the machine, operating instructions and where necessary the accessories in the original packaging. In this way you will always have all the information and parts ready to hand.

Pack the device well or use the original packaging in order to avoid transit damage. Always keep the machine in dry place.

Disposal

Household Appliances, accessories and packaging should be sorted for environmentally-friendly recycling.

Only for EC countries:



Do not dispose of appliances into household waste!

According to the European Directive 2002/96/EC on waste electrical and electronic equipment and its incorporation into national right, products that are

no longer suitable for use must be separately collected and sent for recovery in an environmentally-friendly manner.

DECLARATION OF CONFORMITY

The declaration is to certify that it conforms to CE, EMC, MD and RoHS directives:

EN55014-1: 2017

EN55014-2: 2015

EN61000-3-2: 2014

EN61000-3-3: 2013

All provisions of Annex 1 of Council Directive 2014/30/EU – EMC directive

EN 60745-1: 2009 + A11

EN 60745-2-23: 2013

All provisions of Annex 1 of Council Directive 2006/42/EC – the Machinery Directive

RoHs 2011/65/EU



A handwritten signature in black ink, appearing to read 'Paul Kaye'.

Mr. Paul Kaye, UK QA Manager

Please read the following carefully

FUTURA Direct Ltd. and/or its distributor have provided the parts list and assembly diagram as a reference tool only.

Neither FUTURA Direct Ltd. or its distributor makes any representation or warranty of any kind to the buyer that he or she is qualified to do any repairs or replace any parts of this product. FUTURA Direct Ltd. and its distributor expressly state that all repairs or parts replacement should be done by certified or licensed technicians. The buyer assumes all risk and liability arising out of his or her repairs or parts replacement to the original product.

24 MONTHS LIMITED WARRANTY

If within 24 months from the date of purchase you experience any problems with your product, please return the product to its distributor/dealer for repair or replacement. This warranty DOES NOT COVER normal wear, or any damage as a result of accidents, misuse, abuse or negligence.

[www.futura direct.co.uk](http://www.futura-direct.co.uk)

We FUTURA Direct Ltd, England DN6 7AY declare that the 234 pcs Rotary Tool Kit exclusively manufactured for FUTURA Direct Ltd and has been manufactured according to our fully quality assurance procedures.