

# TERRATEK



## PBG6E

## 6" BENCH GRINDER



*ACL Group (Intl) Ltd*



*Email: [eusales@terratekintl.com](mailto:eusales@terratekintl.com)*



*[www.terratekintl.com](http://www.terratekintl.com)*

**User Manual — Please read and retain for future reference**

# Contents

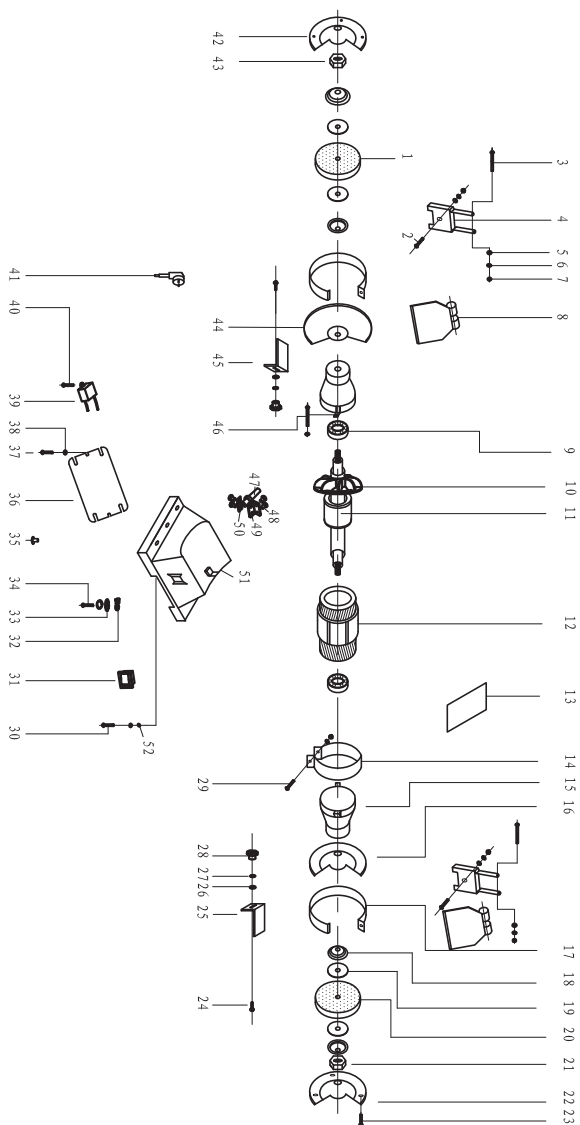
- Parts List
- Technical Information
- Safety Instructions
- Using Your Tool
- Maintenance And Cleaning
- Warranty

# Parts List

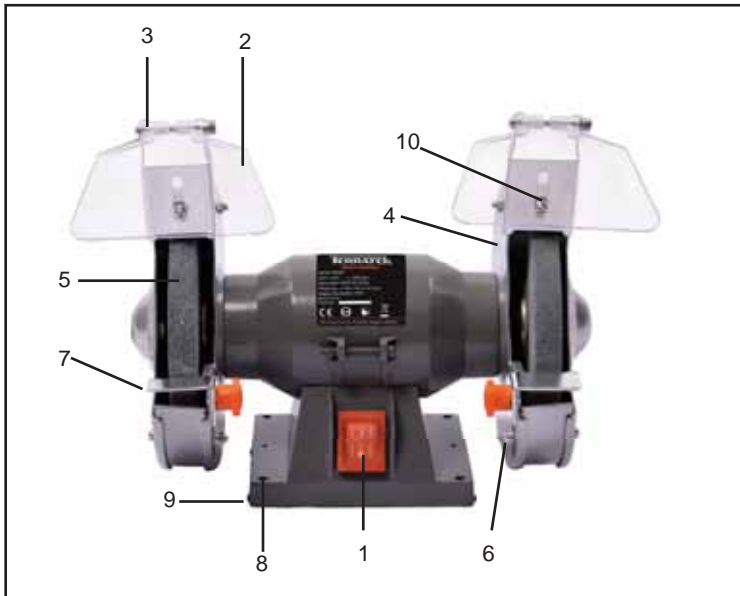
No.	Description	No.	Description
1	Grinder Wheel	11	Rotor
2	Screw	12	Stator
3	Screw	13	Nameplate
4	Eye shield Bracket	14	Middle ring
5	Washer	15	Cover
6	Spring washer	16	Right Inner guard
7	Nut	17	Winding
8	Eye shield	18	Wheel flange
9	Bearing	19	Nameplate of wheel
10	Fan	20	Grinder Wheel

No.	Description	No.	Description
21	Nut	37	Screw
22	Right outer guard	38	Washer
23	Screw	39	Capacitor
24	Square Neck Screw	40	Screw
25	Right tool rest	41	Plug & Cable
26	Tooth washer	42	Left Inner guard
27	Washer	43	Nut
28	Knob nut	44	Left Outer guard
29	Screw	45	Left tool rest
30	Screw	46	Screw
31	Switch	47	Cable adaptor
32	Ground terminal	48	Screw
33	Tooth washer	49	Cable Block
34	Screw	50	Cable clip
35	Rubber Feet	51	Base
36	Base plate	52	Washer

# Exploded Assembly Diagram



NOTICE: Actual product may vary from pictures shown.



- 1 ON/OFF switch
- 2 Eye Shield
- 3 Eye Shield Mount
- 4 Wheel Guard
- 5 Grinding wheel
- 6 Workpiece support fastening screw
- 7 Workpiece support
- 8 Mounting holes
- 9 Foot
- 10 Eye Shield adjustment screw

## Bench Grinder

Model : PGB6E

Rated voltage: 230 V ~ 50 Hz

Power rating: 150 W S2 30 min

Idle speed  $n_0$ : 2950 min<sup>-1</sup>

Grinding wheel diameter: 150 mm

Grinding wheel thickness: 16 mm

Grinding wheel hole diameter: 12.7 mm

Weight N.W./G.W.: 6 /7 kgs

Protection category: I

### Load factor:

A load factor of S2 30 min (intermittent periodic duty) means that you may operate the motor continuously at its nominal power level (150 W) for no longer than the time stipulated on the specifications label (30 minutes ON period). If you fail to observe this time limit the motor will overheat. During the OFF period the motor will cool again to its starting temperature.

### Noise emission levels

The noise emitted by this saw is measured in accordance with EN ISO 3744; EN ISO 11201. The noise at the workplace may exceed 85 db (A). The user will require noise protection measures if this is the case. (Wear ear-muffs!)

### No-Load operation

Sound pressure level  $L_{pA}$  63 dB(A)

Sound power level  $L_{WA}$  76 dB(A)

Uncertainty K: 3dB(A)



**Read this entire manual before using this product. Failure to do so can result in serious injury. Save this manual for future reference.**

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## Read and Keep This Manual

Please read carefully all instructions within this manual. Failure to follow all safety warnings can result in serious personal injury. The term "Power Tool" in all of the following warnings refers to your mains operated (corded) or battery operated (cordless) power tool

## Important SAFETY Information



This symbol is to warn you of potential personal injury hazards. Please read carefully the notes along side this warning to avoid possible injury or death.

## General Safety Rules



**WARNING!** Read all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed refers to corded or cordless power tools.

## Work area safety

Keep work area clean and well lit. **Cluttered or 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.



## **Electrical safety**

Before use, ensure that the power outlet you are using matches the plug on your power tool and that the voltage of the outlet matches that of your power tool.

Only use grounded extension cords with power tools fitted with proper plugs and if using outdoors ensure any extension cord is suitable for outdoor use.

Always try to avoid body contact with grounded surfaces, such as radiators, cooking ranges and any other fixed appliance with metal surfaces.

Do not expose your power tool to wet or damp conditions and NEVER use in rain.

Check regularly the power cord of your machine and any extension cord that you are using for damage.

Do not carry or pull the machine with the power cord.

Ensure the cord is clear from hot surfaces, oil or sharp objects.

## **Personal safety**

Never use your power tool whilst under the influence of alcohol, drugs or medication.

Tiredness can often cause accidents, stay alert.

Never use your power tool without the correct guards in place.

Always use ANSI approved eye protection and dust mask. Non slip safety shoes and hearing protectors should be worn at all times when using your power tool.

Ensure any dust collecting device supplied with your power tool is connected correctly before use.

Ensure all loose clothing, long hair or jewelry is kept clear of the power tool.

Before plugging your power tool into the power outlet ensure the power tool is in the OFF position.

Check that wrenches or adjusting keys have been removed. Any wrench or key left attached to a moving part can result in injury.

## **Power tool use and care.**

Keep your power tool clean and well serviced at all times.

Never adjust or service any power tool before disconnecting from the mains electricity supply.

Always use the correct tool for the job.

Never force the tool to work harder than it is designed to do.

Never use your power tool with broken parts such as switches, guide fences, leg stands or safety guards.

ALWAYS keep your power tools away from children.

Keep cutting tools sharp to ensure less stress on the motor.

Only have your power tool serviced by a qualified repair agent using manufacturers recommended parts.

**WARNING:** For your own safety read Instruction Manual before operating your tool.

- A) Eye protection required.
- B) Keep hands away from grinding wheel.
- C) Do not operate without guards in place.
- D) Do not perform any operation freehand.
- E) Never grab wheel while it is turning.
- F) Turn off tool and wait for tool to stop before moving workpiece or changing settings.

# Safety Instructions

# 4

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

**To work safely with this machine and to prevent accidents it is imperative to read the following safety and operating instructions in full and to put all the information into practice.**

- Always check the machine, the power cable and the plug before use. Only ever use the machine if it is in perfect, undamaged condition. Damaged parts are to be repaired or replaced immediately by a qualified electrician.
- Always pull the plug out of the power socket before carrying out any work on the machine, before changing the grinding tool and in periods of non-use.
- Always run the power cable away from the back of the machine to guard it from damage.
- Keep the machine in a safe place and out of the reach of children.

**It is prohibited to use the machine on asbestos materials.**

**Please note the accident prevention regulations in force in your country.**

- Use only original spare parts.
- Repairs are to be carried out by qualified electricians only.
- The level of noise at the workplace may exceed 85 dB(A). In this case you will need to introduce noise protection measures for the user. The noise produced by this electric tool is measured in accordance with IEC 59 CO 11, IEC 704, DIN 45635 Part 21, NFS 31-031 (84/537/EEC).

- Make sure of your footing. Avoid abnormal working positions.
- Keep electric tools out of the rain. Never use electric tools in wet or damp conditions, and never use them near flammable liquids.
- Keep the power cable safe from damage. Oil, solvent and sharp edges can damage cables.
- Keep your workplace tidy.
- Make sure the power switch is "OFF" before plugging into outlet.
- Wear suitable clothing. Never wear loose-fitting clothes or jewelry. Use a hair-net on long hair.
- For your own safety, use only the manufacturers accessories and attachments.
- Always wear safety goggles, safety gloves and hearing protection on grinding, brushing and cutting jobs.
- Check that the speed marked on the grinding wheel is the same as or higher than the grinders rated speed.
- Make sure that the dimensions of the grinding wheel are suitable for the grinder.
- It is essential to store and handle grinding wheels in accordance with the manufacturers instructions.
- Each time before using a grinding wheel, check it carefully. Never use a grinding wheel which is broken, cracked or damaged in any other way.
- If backing layers are supplied with or stipulated for the grinding wheels, make sure they are used.
- Before beginning with your work, make sure that the grinding wheel is correctly mounted and secured. Allow the tool to run in a safe position for 5 minutes in idle mode. Stop the tool immediately if notable vibrations develop or if you discover any defects. In this case, examine the machine to find the cause of the trouble.
- Never use the grinder without the supplied wheel guard.
- Never use a separate reducer sleeve or adapter to mount grinding wheels with too large a hole.
- Make sure that no danger results from any sparks produced during use, e.g. injury to persons or ignition of flammable substances.
- Always wear safety goggles and hearing protection. Use other personal safety items such as gloves, an apron and a helmet when necessary.
- Please note that the workpiece will get hot when grinding or cutting.

#### **Caution! Risk of burns!**

Allow the workpiece to cool. Some materials become glowing hot when subjected to grinding. On lengthy jobs, interrupt your work and allow the workpiece to cool.

- Use no coolant of any kind.

## Special safety instructions

1. Before you begin to work with the grinding machine, carry out an acoustic test on its grinding wheel (if a grinding wheel is in good condition it will produce a clear tone when tapped, e.g. with a plastic hammer). It is also important to perform this test when fitting new grinding wheels (risk of damage in transit). Always have the machine run in idle mode for a test period of at least 5 minutes. Leave the danger zone for this period.
2. Use only grinding wheels which are marked with data specifying the manufacturer, type of bonding, dimensions and permissible RPM.
3. Keep grinding wheels in a dry place where the temperature is as constant as possible.
4. Use only the supplied clamping flanges to mount the grinding wheels.
5. The clamping flanges used to mount the grinding wheels must be of identical size and format. Backing layers between the clamping flange and the grinding wheel must be made of elastic materials, e.g. rubber, soft board, etc.
6. It is prohibited to enlarge the mounting hole in a grinding wheel by re-drilling.
7. The workpiece supports and the adjustable upper guards must always be positioned as close as possible to the grinding wheel (max. gap 2 mm).
8. Never use a grinding wheel without a safety guard. Make sure that the following distances are not exceeded:
  - workpiece support / grinding wheel: max. 2 mm
  - safety guard / grinding wheel: max. 2 mm
9. The guard holder, workpiece support and Eye shield must all be fitted before you use the double grinder.
10. Always pull out the power plug before changing a grinding wheel.
11. The maximum peripheral speed of the dry grinding wheel is:  
$$m/s = (d \times 3,14 \times n) / (60 \times 1000)$$

d = diameter of the grinding wheel in mm  
n = motor rpm
12. Maximum permissible motor housing temperature: 80°C
13. Before starting work firmly screw the grinder to the workbench etc. using the 4 mounting holes in the base plate.
14. Adjust the Eye shield mount periodically in order to compensate the wear of the wheel. Please note that the distance between the Eye shield mount and the wheel is to be kept as small as possible and should in no case exceed 2 mm.
15. The grinding wheel must be replaced at the latest when the Eye Shield mount (3) and the workpiece support (7) can no longer be set a maximum distance of 2 mm from the grinding wheel.



# Power Extension Cords

When using any extension cord the machine will suffer a power reduction due to the drop in voltage caused by the length of the cord. This can be partially offset by selecting extension cords with lower gauge wire.

- Check all extension cords for damage before use.
- Avoid sharp objects.
- Do not position the cord where it could be subject to traffic passing over it.

# 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<sub>0</sub>.....No load speed
-  .....Conforms to European Harmonised New Approach Directives
- DC .....Direct Current

# Unpacking

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

- In The Box**
- 
- A) Bench grinder
  - B) Eye shields
  - C) Workpiece supports
  - D) Manual
-

## Proper use

The double grinder is a multi-function tool for the rough and precision grinding of metals, plastics and other materials using a selection of grinding wheels.

The machine must only be used for its intended purpose! Even if the machine is used as intended, certain residual risk factors cannot be completely eliminated. The following hazards may arise in connection with the machine construction and layout:

- Contact with the grinding wheel where it is not covered.
- Catapulting of parts from damaged grinding wheels.
- Catapulting of workpieces and parts of workpieces from the machine.
- Damage to hearing if hearing protection is not used as necessary.

The machine is to be used only for its prescribed purpose. Any other use is deemed to be a case of misuse. The user / operator and not the manufacturer will be liable for any damage or injuries of any kind caused as a result of this.

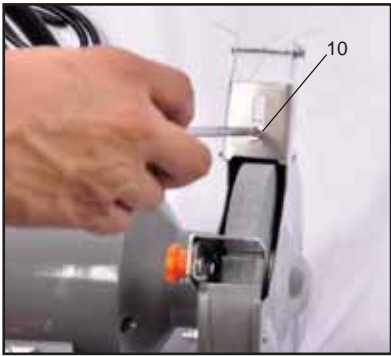
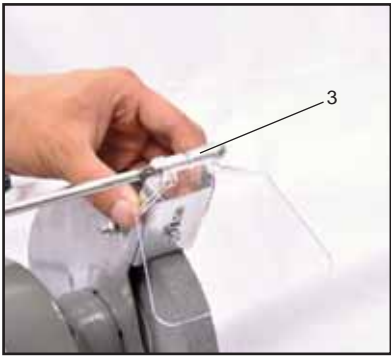
## Before starting the equipment

Pull the power plug before doing any maintenance or assembly work on the equipment.

- The machine must be set up so that it stands firmly, i.e. it must be securely screwed to a work bench or similar.
- All covers and safety devices have to be properly fitted before the machine is switched on.
- Grinding wheel must turn freely.
- Check that the voltage on the rating plate is the same as your supply voltage before you connect the machine to the power supply.

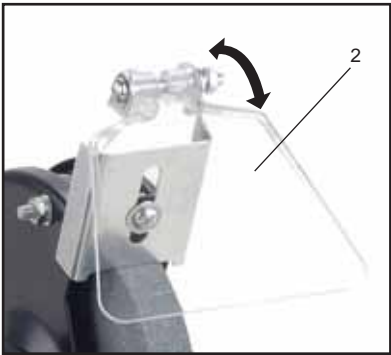
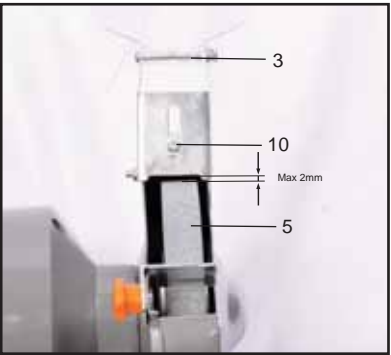
# Fitting The Eye Shields

Fit the Eye shield (3) to the wheel safety guards using the Eye shield adjustment screw (10).



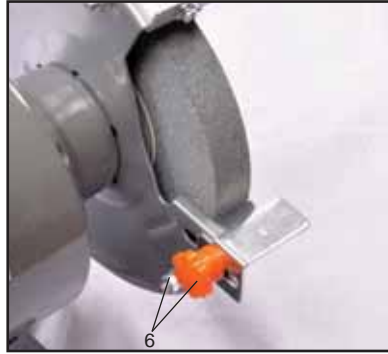
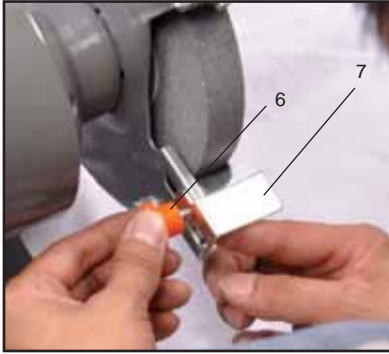
# Adjusting The Eye Shield

Adjust the Eye Shield Mount (3) using the adjustment screw (10) so that the distance between the dry grinding wheel (5) and the Eye Shield mount (3) is as small as possible and DOES NOT exceed 2 mm. Adjust the Eye Shield mount (3) periodically to compensate for wear on the wheel.



## Fitting The Work Piece Supports

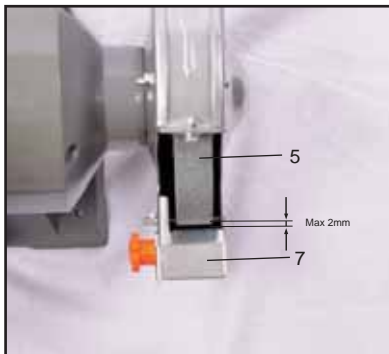
Undo the fastening screws (6). Secure the work piece supports (7) to the double wheel grinder using the fastening screws (6).



## Adjusting the workpiece supports

Adjust the workpiece supports (7) using the fastening screws (6) so that the distance between the dry grinding wheel (5) and the workpiece support (7) is as small as possible and certainly does not exceed 2 mm.

Adjust the workpiece supports (7) periodically to compensate for wear on the dry grinding wheel.



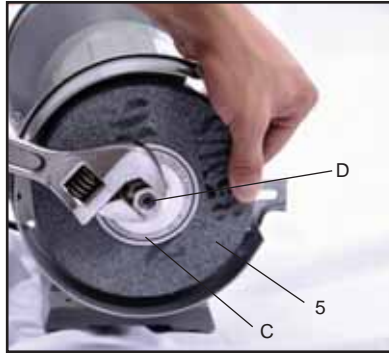
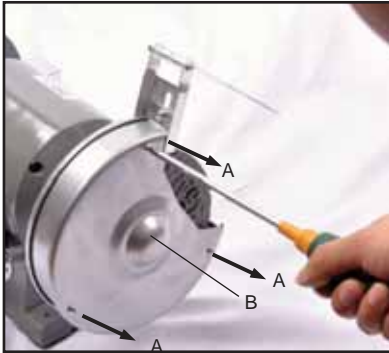


## Changing The Grinding Wheel

Remove the 3 screws (A) holding the side section of the Wheel Guard (B) and remove the Wheel Guard.

Undo the nut (D) (Important: The left grinding wheel is fastened with a left-handed thread and the right grinding wheel with a right-handed thread), by holding the nut of the grinding wheel mount on the opposite side, remove the flange (C), and replace the grindingwheel (5).

To assemble, proceed in reverse order.



## Operation

### ON/OFF switch (1)

To switch on the grinder set the On/Off switch (1) to position "I".

Move the ON/OFF switch (1) to position "0" to switch off the grinder.

After switching on the equipment wait for the equipment to reach its maximum speed of rotation before commencing with the grinding work.



## Grinding

We recommend that you use the fine-grained grinding wheel for fine grinding work and the coarse-grained grinding wheel for coarse grinding work.

Place the work piece onto the work piece support (7) and slowly guide the work piece towards the grinding wheel (5) at the desired angle to the point where the work piece and grinding wheel make contact.

Move the work piece slightly back and forth to produce an optimal grinding result. This way the grinding wheel (5) is evenly worn. Allow the work piece to cool between grinding.

# Maintenance And Cleaning 6

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

## Cleaning

Keep all safety devices, air vents and the motor housing free of dirt and dust as far as possible.

Wipe the equipment with a clean cloth or blow it with compressed air at low pressure.

We recommend that you clean the device immediately after each time you have finished using it.

Clean the equipment regularly with a moist cloth and some soft soap. Do not use cleaning agents or solvents; these could attack the plastic parts of the equipment. Ensure that no water can seep into the device.

## Maintenance

There are no parts inside the equipment which require additional maintenance.

## Disposal

Power tools, accessories and packaging should be sorted for environmentally-friendly recycling.

### Only for EC countries:



Do not dispose of power tools 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

We ACL Group (Intl.) Ltd, England DN6 8LZ declare that the Bench grinder has been manufactured according to our full quality assurance procedures.

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

EN55014-1/A1: 2009

EN55014-2/A2: 2008

EN61000-3-2/ A2: 2009

EN61000-3-3: 2008

All provisions of Annex 1 of Council Directive 2004/108/EC – EMC directive

EN61029-1/A11: 2010

EN61029-2-4: 2011

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

RoHs 2011/65/EU



Mr. Alan Garnett, UK QA Manager

## Environmental Protection

RECYCLING: WASTE ELECTRICAL PRODUCTS SHOULD NOT BE DISPOSED OF WITH HOUSEHOLD WASTE. PLEASE RECYCLE WHERE FACILITIES EXIST. CHECK WITH YOUR LOCAL AUTHORITY OR RETAILER FOR RECYCLING ADVICE.



## **Please read the following carefully**

ACL Group (Intl) Ltd. and/or its distributor has provided the parts list and assembly diagram as a reference tool only. Neither ACL Group (Intl) 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. ACL Group (Intl) 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.

## **12 Months Limited Warranty**

If within 12 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.

# TERRATEK

ACL Group (Intl) Ltd    Email: [eusales@terratekintl.com](mailto:eusales@terratekintl.com)    [www.terratekintl.com](http://www.terratekintl.com)