

# TECHNICAL SPECIFICATIONS

# IMPORTANT SAFETY NOTES

PRODUCT CODE • 144HD	• 144DR	• 144ID
MOTOR TYPE • Hongyang #550	• Jimmashi #725	• Hongyang #550
RATED VOLTAGE • 14.4V	• 14.4V	• 14.4V
MAXIMUM TORQUE • 15Nm	• 15Nm	• 90Nm
GEARBOX • METAL+HAMMER	• 2 SPEED	• METAL+IMPACT
IMPACT/HAMMER RATE@ENERGY • 0-4800BPM @ 1.0J	• N/A	• 0-3300IPM
NO LOAD SPEED • 0-850RPM	• LOW 0-350RPM	• 0-2400RPM
	• HIGH 0-1000RPM	
TORQUE SETTINGS • N/A	• 19+1	• N/A
CHUCK TYPE / CAPACITY • SDS PLUS	• 3 JAW 10mm (3/8")	• 1/2" HEX
DRILLING CAPACITY:		
STEEL • 13mm (1/2")	• 13mm (1/2")	• 10mm (3/8")
WOOD • 28mm (1.1")	• 28mm (1.1")	• 13mm (1/2")
MASONRY • 13mm (1/2")	• 10mm (3/8")	• 10mm (3/8")
WEIGHT WITH 144BP15 • 1.15kg (2b 8oz)	• 1.15kg (2b 8oz)	• 1.15kg (2b 8oz)

This product is sold in several configurations. The Rating Label is fixed inside the battery compartment, check the codes on the Rating Label on your product match those in this user manual. The Rating Label will show basic warnings and specifications. The images and descriptions in this user manual may differ from your product. For features or accessories not covered by this manual or if you are unsure about a feature or function contact your supplier or visit [www.cel-global.com](http://www.cel-global.com) where you can find updated user manuals and compatible parts.

No person should use this product without first reading and understanding all documentation and warning labels and those from accessories and attachments used. Keep these instructions safe and provide them to all users. For use only as outlined in this document, any other use will be considered as misuse.



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UK • HK • USA • China • Europe • Australia • Japan

## Intended Use

### 144HD

With an appropriate SDS PLUS attachment fitted in the chuck this tool is intended for screwing and unscrewing, drilling into wood, metal and plastic as well as masonry work up to the ability of the fitted attachment and within the specification of the tool.

### 144DR

With an appropriate attachment fitted in the chuck this tool is intended for screwing and unscrewing, drilling into wood, metal and plastic as well as light masonry work up to the ability of the fitted attachment and within the specification of the tool.

### 144ID

With an appropriate attachment fitted in the chuck this tool is intended for screwing and unscrewing, drilling into wood, metal and plastic up to the ability of the fitted attachment and within the specification of the tool.

This product is sold in several configurations. The images and descriptions in this user manual may differ from your product. For features or accessories not covered by this manual or if you are unsure about a feature or function contact your supplier or visit [www.cel-global.com](http://www.cel-global.com) where you can find updated user manuals and compatible parts.

## General Safety Rules for Power Tools

Read all 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 tools plus compatible chargers and accessories.

### 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. Always fully uncoil cables to avoid heat buildup.
- 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 and 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. Fully uncoil all cords in use.

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, and/or hearing protection used for appropriate conditions will reduce personal injuries. Be aware of dangerous conditions that can occur while working on certain materials. Take appropriate measures to reduce risk. For example; Oak and Beech can give off harmful dust. Use dust

extraction and respiratory protection along with other safety precautions.

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 energising 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) Battery tool use and care

- a) Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- b) Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- c) When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- d) Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

### 6) Service

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

### Additional Safety Warnings for Drills and Impact Drivers

**Do not reach underneath the workpiece.** It is important to support the work properly to minimize body exposure, tool binding, or loss of control.

**Hold power tool by the insulated gripping surfaces, when performing an operation where the cutting tool may run into hidden wiring.** Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.

Be prepared for kick back and torque twisting from jammed bits and blades, ensure these forces do not pose additional risk.

If you experience any problems with the product please contact your supplier or find your regional office via the website: [www.cel-global.com](http://www.cel-global.com)

### Guarantee

Normal wear and tear, including accessory wear, is not covered under guarantee. Following successful registration, the product is guaranteed for domestic use against manufacturing faults for a period of 24 months. Proper care is required to maintain this product in working condition. This product is not guaranteed for hire purposes. If you have any questions, please contact us.

### Declaration of Conformity

We declare under our sole responsibility that the products described in "Technical Specifications" is in conformity with the following standards or standardisation documents:

144HD  
EN 60745-1:2009+A11:2010  
EN 60745-2-8:2010  
ZEK 01.4-08,ISSUE 29-11-2011  
EN 55014-1:2006+A1:2009+A2:2011  
EN 55014-2:1997+A1:2001+A2:2008

144DR  
2006/42/EC

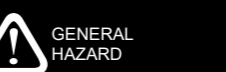
144ID  
2006/42/EC

Chris Elsworth/  
Managing Director - 3rd January, 2014

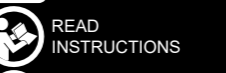
C Enterprise (UK) LTD  
Unit 4 Harbour Road Trading Estate  
Portsmouth, BS20 7BL, UK

Technical file can be provided by:  
CEL-HK 1604 Nan Fung Commercial Centre,  
19 Lam Lok Street, Kowloon Bay, Hong Kong

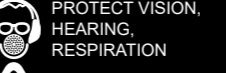
# WARNING SYMBOLS



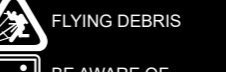
GENERAL HAZARD



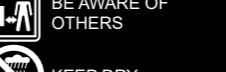
READ INSTRUCTIONS



PROTECT VISION, HEARING, RESPIRATION



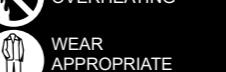
FLYING DEBRIS



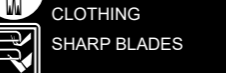
BE AWARE OF OTHERS



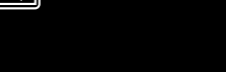
KEEP DRY



PROTECT FROM OVERHEATING



WEAR APPROPRIATE CLOTHING



SHARP BLADES

This user manual refers to the battery 144BP15 and has specific sections which are applicable only to the 144HD SDS Hammer Drill, the 144DR Drill/Driver and the 144ID Impact Driver. Users must read and understand all warnings and documentation relevant to attachments, accessories and materials used. If absent, replacement user manuals can be found via [www.cel-global.com](http://www.cel-global.com)

# User Manual 144HD SDS+ Hammer Drill 144DR Drill/Driver 144ID Impact Driver



144HD SDS PLUS Hammer Drill ①

SDS PLUS Chuck and Release Collar ②

Hammer / Drill Mode Switch ③

Motor Vents ④

144DR Drill / Driver ⑤

High / Low Gear Selector ⑥

Chuck Jaws ⑦

Chuck Collar ⑧

Torque Selection Collar ⑨

Motor Vents ⑩

144ID Impact Driver ⑪

1/4" Hexagonal Quick Release Bit Holder ⑫

Motor Vents ⑬

14.4V CEL

# PREPARATION

Read and understand all safety warnings and all instructions before operating this product. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

**WARNING!** For AC tools and devices; check that input voltages on the rating plates and the plug types match your local mains supply. If different, contact your supplier immediately and follow their advice. Do not modify the charger or plug in any way. For DC tools; only use batteries and chargers specifically recommended by the manufacturer.

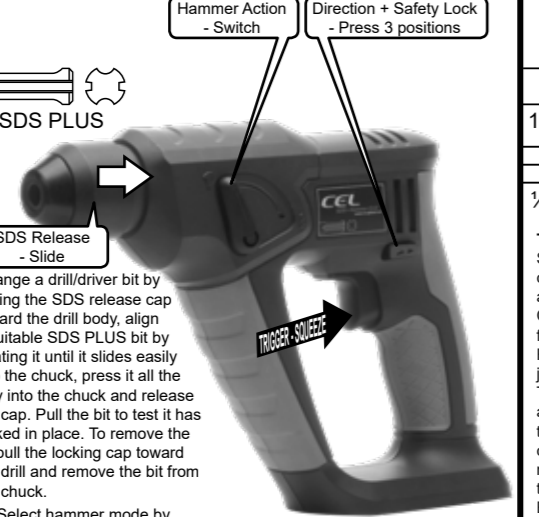
- Prepare your tools and work piece**
- Charge your battery as described in the documents provided with the battery.
  - Select the appropriate accessory for your work.
  - Secure your work so it is safe and accessible. Carefully mark areas to be cut or aligned.
  - Fit an appropriate accessory to your tool as described in the following sections. Check it is properly seated in the chuck and secured.
  - Fit a charged battery as described in the documents provided with the battery, check it is secure, ensure the moving parts are free to turn without doing any harm and run the tool briefly to test both the battery and the alignment of the accessory. Adjust and retest as required.

**To change drive direction**

Press the Direction Switch on the tool, it has 3 positions. The centre position locks the trigger, the other positions will turn the chuck clockwise or anti-clockwise.

## I44HD SDS Hammer Drill

Best for heavy duty drilling and masonry



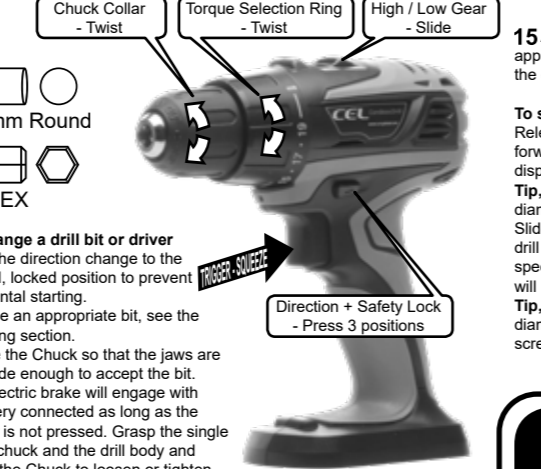
Change a drill/driver bit by pulling the SDS release cap toward the drill body, align a suitable SDS PLUS bit by rotating it until it slides easily into the chuck, press it all the way into the chuck and release the cap. Pull the bit to test it has locked in place. To remove the bit pull the locking cap toward the drill and remove the bit from the chuck.

**T** Select hammer mode by rotating the switch upward and toward the chuck. This mode is for percussive drilling into brick and masonry.  
**F** For regular drilling in wood and metal or using as a screw driver, hammer mode should be disabled by rotating the switch down and toward the rear of the drill.

**WARNING!** Vibration can cause permanent injury if a user is exposed for extended periods. Take regular breaks and stop to seek professional advice if any pain or discomfort is caused by using the tool.

## I44DR Drill/Driver

All rounder for general drilling and screw driving



**To change a drill bit or driver**  
Slide the direction change to the central, locked position to prevent accidental starting. Choose an appropriate bit, see the following section. Rotate the Chuck so that the jaws are just wide enough to accept the bit. The electric brake will engage with a battery connected as long as the trigger is not pressed. Grasp the single collar chuck and the drill body and rotate the Chuck to loosen or tighten the jaws.

Ensure enough of the drill/driver bit is held by the jaws, at least 10mm or 25% should be within the jaws. Check the bit is centred in the jaws and tighten securely.  
**Note!** Before using the bit briefly activate the drill to ensure the bit is centred and secure. If the end of the bit wobbles when rotating then loosen and re-fit.  
**Select the Torque and gear required**  
Twist the Torque Selection Ring so the required setting is aligned with the arrow on top of the drill.  
Drilling mode is indicated by the drill symbol -the clutch is disabled for maximum torque.

**15** Align a number to the arrow to set drive torque, a lower number will apply less torque to the chuck -driving a screw until the clutch disengages the chuck- a high number will drive a screw deeper.

**To switch between high and low gear**  
Release the trigger and allow the drill to stop. Slide the Gear Selector forward toward the chuck for high gear and high speed drilling, **2** will be displayed.

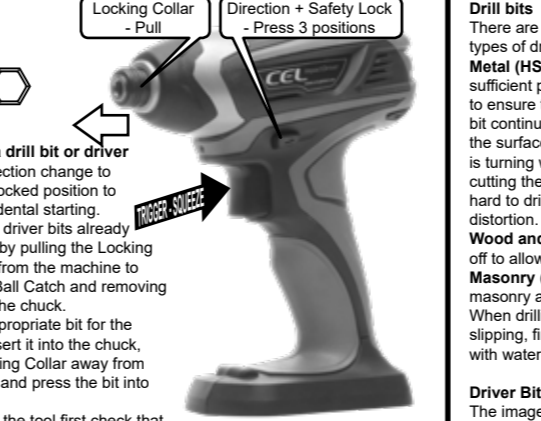
**Tip,** use high speed for small diameter drill bits. Slide toward the rear of the drill to select low gear for low speed and higher torque **1** will be displayed.  
**Tip,** use low gear for large diameter drill bits and driving screws.

### WARNING!

Bits and screws can be extremely hot after use.  
Sharp blades, heat buildup, harmful dust and flying debris are a danger to user and bystanders. Use of suitable protective clothing, gloves, footwear, lung, eye and ear protection as well as safe working practices can reduce these risks. Always switch a tool off prior to any adjustment or when fitting or removing a battery.  
If the battery is hot, damaged or emitting smoke or strong smells it should not be used. Contact your seller or CEL to replace faulty items.

## I44ID Impact Driver

Best for driving screws

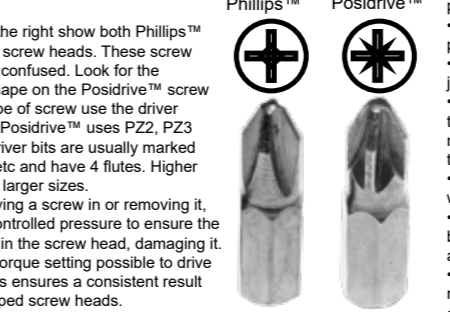


**To change a drill bit or driver**  
Slide the direction change to the central, locked position to prevent accidental starting. Remove any driver bits already in the chuck by pulling the Locking Collar away from the machine to release the Ball Catch and removing the bit from the chuck. Select an appropriate bit for the fixing and insert it into the chuck, pull the Locking Collar away from the machine and press the bit into the chuck.

Before using the tool first check that the bit is held firmly in place and cannot be pulled loose. Operate the tool away from the fixing briefly to check for alignment and correct operation before applying the bit to the fixing. Re-fit and re-test the bit's fitting if necessary.  
**Note!** Impact Drivers are much more efficient at driving/removing screws and threaded fixings than a rotary drill. Because of this you will see greatly increased battery performance when driving screws when using an impact driver. Because of the high torque levels achieved by these tools a high quality driver bit is recommended. Look for "Hardened" driver bits and bits rated for use with impact drivers. Although impact drivers are designed for fixings, they make excellent drills as well. Look for 1/4" hexagon fit drill bits or a 1/4" hexagon fit chuck which will allow regular drill bits to be held.

# CHOOSE THE CORRECT TOOL

**Drill bits**  
There are 3 main types of drill bit:  
**Metal (HSS)**, use sufficient pressure to ensure the drill bit continues to cut the surface, if it is turning without cutting then the surface will heat up and become hardened making it very hard to drill through. Support thin metals with a wood backing to prevent distortion. Lubricate with oil to keep bits cool, beware of fire risks.  
**Wood and plastics** (has an extra point on the tip), regularly back the drill off to allow swarf (shavings) to clear the hole.  
**Masonry** (has 2 spade head) a hammer drill will make fast work of hard masonry and brick, a small pilot hole before using a large drill bit is faster. When drilling a tile use masking tape to mark the hole and to prevent slipping, firm even pressure and patience will give a good result. Lubricate with water to reduce dust.



**Driver Bits**  
The images on the right show both Phillips™ and Posidrive™ screw heads. These screw heads are often confused. Look for the second cross shape on the Posidrive™ screw head, for this type of screw use the driver bit with 8 flutes. Posidrive™ uses PZ2, PZ3 etc. Phillips™ driver bits are usually marked with PH2, PH3 etc and have 4 flutes. Higher numbers are for larger sizes.  
**Note!** When driving a screw in or removing it, use very firm, controlled pressure to ensure the bit does not slip in the screw head, damaging it. Use the lowest torque setting possible to drive screws flush, this ensures a consistent result and avoids stripped screw heads.

# OPERATION TIPS



READ ALL INSTRUCTIONS

- Mark your work and use a hole punch to guide the drill bit or screw into the correct location.
- When drilling start the drill and allow it to reach full speed before starting to cut. Maintain a steady, even pressure and speed that does not slow the rotation speed. Ease off slightly whenever the cutting progress slows and lift the bit out of the hole with the drill still spinning. This will allow debris to leave the hole and relieve pressure. When you press the bit back into the hole you should notice increased cutting speed.

When drilling metals you should keep a firm constant pressure that ensures the drill bit is always cutting through the material. If the drill bit is allowed to spin without cutting then heat will build up and harden the surface. Once hardened the material will be very hard to cut and may damage the drill bit. Water or oil continuously applied throughout the process to dissipate heat will help maintain the cutting surfaces.

- Use a good quality sharp drill bit or hardened driver bit with the correct profile as described in the previous section.
- When drilling always use the clockwise direction except to free a jammed bit.
- Make sure you press the driver bit firmly into the fixing when both tightening and loosening a fixing. This pressure should be enough so as not to allow the bit to "cam" out which may strip the fixing head or damage the driver bit.
- Clamp or fix scrap material directly under your work to avoid splintering when drilling.
- Use sufficient pressure to ensure the drill is always cutting material and back off that pressure to avoid splintering the reverse side of your work and allowing the drill to impact with the work piece.
- When doing big jobs that require constant charging of the batteries remember that you can swap Li-Ion batteries at any time during a charge/discharge cycle.

**Storage**  
Store all tools, instruction manuals and accessories in a secure, dry place. In this way you will always have all the information and parts ready to hand. Lithium ion batteries should ideally be stored with 40 to 80% charge between 10°C and 20°C (50°F and 68°F).  
**WARNING!** Always test and charge Li-ion batteries before storage and at least every 3 months to prevent permanent damage. Using the battery for a short period then charging it will allow the charger to balance the voltage between the 4 cells.

**Environment**  
When the time comes to dispose of this product please consider the environment and take it to a recognised recycling facility instead of disposing with general household waste. Contact your local council, civic amenity site, or recycling centre for information on the recycling and disposal of electrical products and batteries. If you do not have access to suitable disposal facilities in your area please contact your place of purchase, they will advise you on the best way to dispose of your product.

**Maintenance**  
All electrical parts should be regularly serviced by an approved engineer.