

INDUSTRIAL QUALITY POWER TOOLS

marketing@rutherford.co.za

www.makita.co.za

Edition 16 November 2007

Power Golid.

by **Trakita** 



Valid until mid January 2008 while stocks last Prices are inclusive of VAT.

### MT811 Impact Drill (13mm)

The MT811 is a compact and lightweight impact drill with a powerful 430W motor.

### **Specifications**

Continuous Rating Input 430W Max. Capacities Concrete 13mm Steel 13mm 18mm Mood 0-30,800 Blows per min. No Load Speed 0-2.800r/min

Overall Length 272mm Net Weight 1.6kg Power Supply Cord 2.0m

### MT190 Power Planer (82mm)

The MT190 provides industrial performance and durability with a high power - to - weight ratio. This 82mm planer has the power to perform planing applications, from edging and chamfering to rebating.



makte

**Double Insulation** 



Power Supply Cord

Continuous Rating Input 580W Planing Width 82mm Planing Depth 1mm No Load Speed 16.000r/min Overall Length 290mm Net Weight 2.5kg

R675.00

maktec

## MT920 Finishing Sander

2.0m

The MT920 is an extremely versatile, compact & lightweight sander, with a small but powerful motor. The ergonomically contoured tool head makes for easy one-hand operation. Paper installation is quick and easy and the rigid aluminum foot is protected from the dust by a sponge sleeve, thereby ensuring longer tool life.

Double Insulation

R395.00

### **Specifications**

Continuous Rating Input Orbits per minute Pad Size Pad Fastening System Net Weight Power Supply Cord

14,000 opm 112x102mm Clamper 0.9kg 2.0m



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## **The Truth About Holes**

Joncrete

Drilling

There have been plenty of requests to discuss concrete drilling from the readers, so we decided to expand on the story "Concrete Drilling, Get a Rotary Hammer" in the 6th Edition of the MaktimesSA and place emphasis on the right tool and the right technique to make holes in concrete efficiently.

Making holes in concrete doesn't have to be hard work. But many contractors make it difficult by trying to make do with the tools they have. When you look at the time lost to using the wrong tool, the cost could easily pay for the new tool or bits needed to speed the process.

That's the consensus of power tool manufacturers who deal with contractors' hole-making questions. Here's how they suggest you get to the hole truth.

### Do you have the right tool?

We often see contractors trying to use a hammer drill to do a job that should be done by a rotary hammer.

We see contractors burning out hammer drills and bits all of the time because they are using the wrong tool for the job. When it comes to poured concrete, your best bet is a rotary hammer. A hammer drill is too light of a tool for making any holes in poured concrete.

Hammer drills have a difficult time making holes in concrete because the hammer drill relies on high rotational speed and a lighter impact to chip away material. A rotary hammer uses pounding force to fracture the concrete. The rotation of the bit changes the orientation of the edges of the bit's carbide tips in the hole and augers dust out of the hole.

### Size up

While it's tempting to use a smaller tool for a slightly bigger concrete hole making job, the tool experts recommend against it. Instead, select your tool so the job falls within the operating capacity of the tool, around 70% of the tool's maximum operating range is a good level to work at, leaving a 30% safety range. If the concrete has a high compressive strength, is older concrete, or has very hard aggregate, consider using a larger tool to make the hole.

#### **Concrete bits**

Different bits and the applications they are used for, was discussed in the 13th Edition of the MaktimesSA. Here we discuss in more detail the bits used for drilling holes in concrete. Concrete bits do not drill the way a wood bit goes through wood or a jobber bit drills steel. Instead, it works by pulverizing the concrete to dust, then evacuates the dust away from the tip and out of the hole. Drilling in concrete is, in reality, a continuous sequence of actions to pulverize the concrete and to remove the dust.

SDS stands for Schnell Drilling System or Slotted Drive System. SDS shanks are slotted and have curved recesses all of which lock nicely into the tool holders of the rotary hammers. Most modern rotary hammers below 30mm capacity would utilize the **SDS-PLUS** drill bit system and is by far the most popular worldwide. **SDS-MAX** is the "super colossal" version of SDS-Plus. They range from 12mm to 50mm solid bits. **SPLINE SHANK** are bits that are becoming less popular due to International Standardization. They are basically drill bits that have fins (or "splines") at the end of the shank.

Carbide tips are sintered micro-grain carbide and cobalt, moulded into a precise tip size and shape. This combination is brazed to the flute, resulting in a very hard, durable tip.

You can find bits in all price ranges. Agood rule of thumb: You should be able to get about 100 holes per bit unless you are operating in very demanding conditions or damaging the bit by not drilling straight down into the hole. The most economical drill bits will have two tips and are the most commonly used.



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The new Makita Deltagon SDS+ drill bits have three cutting edges rather than the traditional two and this simple formula delivers far more accurate holes, even in the toughest materials. A traditional two-edge drill bit suffers from poor directional stability, especially where the drilling of a pilot hole is not possible or practical. The drill bit tends to "wander" making the finished hole oversize and often actually triangular rather than round.

The Makita Deltagon three-edge drill bits have a more stable tri-axial cutting performance, the three edges keeping the bit firmly in one position. The result is a hole exactly where positioned and a far better quality of "round" hole, especially important when using adhesive or tension fixings.

Makita Deltagon drill bits have solid tungsten tips, the tungsten brazed onto the carbon steel bit which is then finished by rotary grinder to total accuracy. This formula gives a very long working life, easily justifying the cost investment. Deltagon bits should be the preferred selection for any drilling into brick, block, concrete, reinforced concrete, mortar or stone. A Deltagon bit will drill through steel cladding up to 1mm thick and then into the concrete section all in one process.

The re-enforcing bars in concrete castings can cause serious accuracy problems as well as the risk of the two-edge drill bit snagging with risk to the machine and the operator. Here again the three-edge Deltagon bit proves valuable. The three cutting edges will keep the bit rotating whereas a two-edge bit will either snag beside the rebar or be forced away from the rebar elongating the hole. The three-edge bit will always deliver a round hole, safely,



### Maintain your tools

Care for the tools you are using has been mentioned in previous editions, but the importance of this cannot be stressed enough. Next to using an undersized drill for a drilling job, poor maintenance practices are a leading killer of rotary hammers.

Rotary hammers create impact through electro-mechanical or electro-pneumatic systems inside the tool. These systems transfer intense forces into concrete in a highly abrasive environment. The components that create this energy must be maintained.

It's important to pay attention to the maintenance intervals on these tools. Too many people run them to failure when timely lubrication and cleaning would have greatly extended the life of the tool.

# More Power, Less Weight

Makita recently released its new 18V LXT Lithium-Ion 24mm Cordless SDS-Plus Rotary Hammer (model BHR240ZK). This new rotary hammer adds to the already extensive Makita LXT Series featuring the new 18V LXT Extreme Lithium-Ion Technology, a breakthrough in cordless that delivers more power, less weight and better engineering.

The LXT Lithium-lon Battery makes this rotary hammer perfect for remote use, where running a cord is not an option. It also packs plenty of power. In testing, it drilled 65 6.35mm holes into concrete on a single charge.

The new BHR240ZK Rotary Hammer has a 3-Mode switch for rotation only, hammering with rotation, or hammering only. It has 2x faster drilling with synchronized RPM and BPM for more efficient drilling. The built-in torque limiter clutch disengages if the bit jams when hitting rebar or other obstruction. In addition, the chisel rotates 360° with 40 different positions to get the best working setting. And with a more compact and lightweight design (410mm long, 3.0kg.) as well as an ergonomic shape that fits like a glove. Makita's new rotary hammer delivers better control and less operator fatigue. The BHR240ZK is ideal for electricians, plumbers, masons and general contractors who require a best-in-class engineered cordless rotary hammer. \*Note that the chipping mode on any pistol grip rotary hammer is a very secondary feature - these machines are not demolition hammers which are used for regular chipping work.\*



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# **Counterfeit Control**

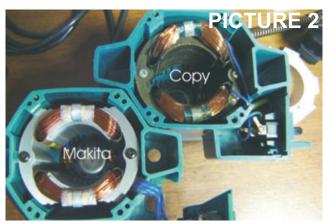
### **Makita Quality**

The increasing number of counterfeit products entering the South African market has been highlighted before and this problem affects not only the Makita brand, but also the reputation of dealers who sell original Makita products.

We at Makita would like readers to understand just how inferior the **copy** of the Makita product is, compared to the original. The poor quality of the product and the price are clear indicators that it is not an original Makita product

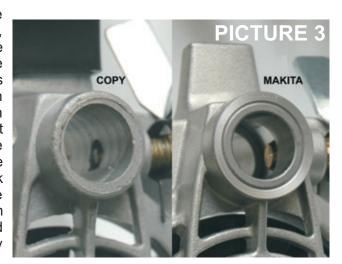
The print on the carton for this particular counterfeit model (3612BR Router) clearly states that the product is from the Makita Corporation Japan, which is a blatant untruth. The 3612BR (see Picture 1) is not part of the standard range that is offered in SouthAfrica.

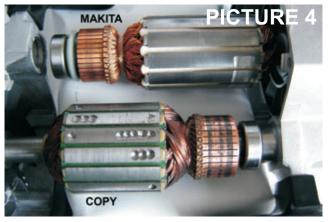




Some of he inferior parts include the copper windings on the motor armature and the motor field coil which are thinner and do not use high-grade magnetic copper wire as with the Makita model. The copy field coil (see Picture 2) is not dimple stamped as in the Makita and therefore does not allow for a more free flowing current. The copy uses solid brush holders and thinner ring terminals which results in an unstable output as the terminal plate is responsible for securely transferring electrical current from the field core to the carbon brushes. The wiring for the on/off switch and the extension on the copy is an example of poor quality in that it uses 1.5mm core compared to the Makita which uses 2.5mm core. The copy on/off switch is also only a single pole switch.

The armature on the copy is not CNC balanced (see picture 4). The use of CNC machines and precise measuring equipment, guarantees the most efficient power transfer possible. The commutator is a conductor which allows current to flow between the armature and field. The copy commutator has thicker sections and is not finished to a near zero run-out and does not have a mirror finish which results in a poor current flow. The Makita uses a custom designed plastic fan. The copy uses a low quality steel fan. The collet cone on the copy doesn't fit into the collet holder as precisely as the Makita. The handles on the copy router are made cheaply and are coming apart. The Makita router casing has a registered trademark and codes for quality of plastics used. You will not find this on the copy router. All parts on the Makita router have part numbers which results in spares being able to be purchased by the customer and used to replace the necessary item unlike the case with the copy which has no numbered parts resulting in no spares for this router.





The plunging system on the copy is not up to standard and the screws on the router are cheap and not nicely coated. The Makita router uses stainless steel and a replaceable sleeve on the plunging system (see Picture 3). The copy uses mild steel with no replaceable sleeve which results in wear and tear and a rough plunge. Most importantly, there are no serial numbers and no warranty slip with the copy, which means no support available for this router. Both are present with the Makita router. The quality of the design and components inevitably shows the Makita router to be far superior than the copy.

The difference can definitely be felt in the use, where the copy delivers a very inaccurate plunge action.





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# Plunge Cut Circular Saw

### **Tip-Resistant Design**

Sliding the lever prevents this tool from falling down towards blade case.



### **New Product**

### **Depth Stopper for Splinter-free Cutting**

Enables to easily cut a preliminary groove at a depth of 2mm for splinter-free cuts.



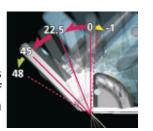


**Bevel Cut** 

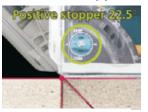
Bevel Range :: -1 to 48 degrees

### **Precision Bevel Cut**

The position of cutting line is always the same regardless of bevel angle in cutting with Guide Rail attached.



Positive stopper.





### **Close-to-Wall Cutting**

Only 18mm away from wall at minimum





### **SPECIFICATION**

**Continuous rating Input** 1,300W Capacity at 90 degrees 56mm at 45 degrees 40mm at 48 degrees 38mm Blade diameter 165mm No load speed (r/min) 2,000 - 5,200

**Dimensions**  $(L \times W \times H)$ 

341mm x 225mm

x 250mm

**Net weight** 4.1kg Power supply cord 2.5m

# **Editors Notes**

Included in this edition of our MaktimesSA you will find the Maktec Festive Promotion with the MT920 Finishing Sander. MT190 Planer and the MT811 Impact Drill being sold at great prices which are valid until mid January 2008 while stocks last. Congratulations to Nicolene Hassen from Botswana for winning the MT920 Maktec competition from our last edition for correctly answering that the sander operates at 14,000 orbits per minute.

**Best Regards** 

**Makita SA Marketing Department** 

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