

The Home HANDYMAN

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Things we learn

I have always had an interest in DIY. And although I knew a few things about DIY when I became editor of *The Home Handyman* magazine, I have learnt a lot more in the past four years. This, however, doesn't mean that I know everything. Studying journalism and my profession of being a magazine editor did not teach me anything about nuts and bolts.

I sometimes meet new people and, in an awkward search for something to talk about, except the weather, my profession comes up as a topic of conversation. And after you answer the first barrage of questions, you usually get the follow-up question, which mostly starts with, "I have this problem..."

Another thing I have learnt over time is that if you don't know the answer, reply with a question. It usually goes something like this, "I have a problem... my plaster is cracking up, what could be the cause?" Then I say, "There could be many causes, can you tell me how the plaster was mixed?"

The questions will carry on for a while until it is understood that I just don't have all the facts to make the correct diagnosis. It will often be left at that and we can move on to things such as the Stormers' and Sharks' poor performance this year. Something I can talk about at length.

I recently got caught in a similar situation at a nappy party (yes, I went to a nappy party). It didn't take long before I found myself isolated with the sister of 'the mother to be'. After the formalities of introducing myself and a brief moment of silence, she asked, "So what do you do for a living?" I followed with the usual, but she didn't fire off the usual problems to solve. It was my turn and I went all the way. She is a quality controller at a big baking company. "So," I said, "Why is it that when I bake, the cake always seems to fall flat, even when I follow the recipe to the book?" "Well," she replied, "it might be your thermostat, you should be able to fix that?" I then changed the conversation and mentioned the warmer than normal winter we are experiencing.

Enjoy the June issue and please remember, all content was supplied by experts from their respective field of expertise.



Johann Stadler, Editor



*Roelof Strydom,
Assistant to the Editor*

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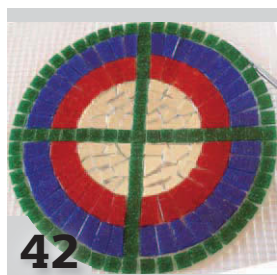
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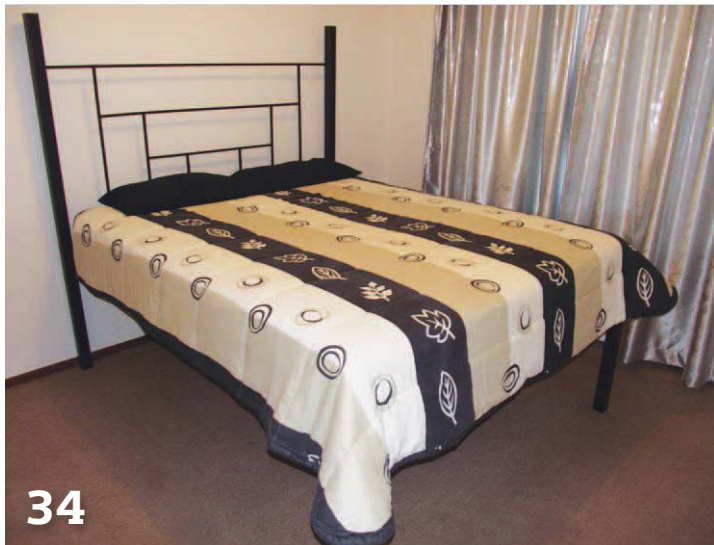
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From start to finish

Norton has launched an innovative pack as part of their Right Angle Grinding Initiative, which promotes using an angle grinder for all material processing – from start to finish. The pack is aimed at all DIY enthusiasts as well as small to medium contractors and contains all you need for cutting, grinding and finishing on a metal, steel or stainless steel project.

The pack includes all you need to get to an acceptable surface finish, just one step short of polishing. Available in stores from June, enquire at your local hardware retailer.



For more information

Visit: www.norton.eu
Tel: 011-961-2000 or
0860-NORTON



The following is included in the pack:

Cutting disc	Material	Finish
1 x Norton multi-purpose cutting disc 115mm x 1mm	Steel, stainless steel, metal, aluminium, PVC, perspex, wood, tiles	Cutting
1 x Norton Vulcan cutting disc 115mm x 1mm	Steel and stainless steel	Cutting
1 x Norton Vulcan grinding disc 115mm x 6.4mm	Steel and stainless steel	Grinding
1 x Norton flap disc P80 or P120	Steel and stainless steel	Finishing

Bicycle repair stand



Cycling is growing in popularity in all its forms, and now it is easier to do all your repairs yourself. The Tork Craft bicycle repair stand has been made with functionality in mind. It has an adjustable work height between 110cm and 190cm, which makes for comfortable working and easy 360° access to any point on your bike.

The four-legged support stand is stable when applying force in any direction while working on your bike. The clamps are also easy to use and adjustable, which makes it practical to operate with one hand if needed. The clamps also adjust to both standard and oversized tubing.

The stand includes a magnetic parts holder and handle bar stabiliser, and it can handle a maximum weight of 30kg.



For more information

Visit: www.vermontsales.co.za
Tel: 011-314-7711

Multi-angle drill bits



Multi-angle drill bits are ideal for installing mortise locks, hinges and rebates. These bits from Eureka can be used to form channels, cuts, mills and can also router and make mortise gaps. Whether you need to make straight or angled holes, rebates or countersink, these drill bits enable you to do so with the nine different cutting edges, including straight, forward, backwards, sideways and curved.



For more information

Visit: www.drill-bits.co.za
Tel: 011-471-0800

Better braaing

After a hard day's work nothing is quite as relaxing as getting a braai going. The Tork Craft braai grilling basket makes this outdoor activity a little easier and you will also be able to utilise your braai more often. It is 285mm x 285mm, with a handle of 248mm. The basket can be used for fish, meat, prawns and vegetables.

The handle can easily be removed and attached, which makes it ideal for braais with lids. The stainless steel makes it rust resistant and easy to clean, while the sloped sides and rounded corners make it easy to stir, shake or toss food while cooking.



For more information

Visit: www.vermontsales.co.za
Tel: 011-314-7711





i For more information

Visit: www.woodoc.com
Tel: 0800-411-200

Food for wood

Woodoc 25W Waterborne Wood Floor Sealer is a modern floor sealer ideal for DIY application. It is durable, non-yellowing and has low odour levels during application. Being a waterborne product, cleaning up is easily done with water before brushes and other equipment dry out. Once dried and cured, however, Woodoc 25W is impervious to water and its flexible surface will withstand everyday use. It is safe to use and easy maintain. Available in clear gloss or matt and also available in white.

Fast and accurate

The 5165 AA and 5265 AA Circular Saws from Skil are designed for fast, high-precision cutting into various materials. These new additions from Skil are ergonomically designed and compact to ensure optimum control and guidance. A safety switch prevents accidental starting and the integrated dust port, which can be connected to most household vacuum cleaners, allows for a clean working environment. The ball bearings of both the tools are sealed to protect against dust and increase durability. Additionally, the helical gears provide great strength and reduction of noise levels when working.

Both tools come standard with a wrench for easy blade changing and a parallel guide for straight cutting assistance. Also included in the standard package is an 18-tooth, carbide-tipped, 184mm blade for model 5265 AA and a 24-tooth, hardened steel, 184mm blade for model 5165 AA. Available at retail outlets at the recommended prices of R769 and R799 respectively.



i For more information

Visit: www.skil.com
Tel: 011-651-9600

Circular Saws	Skil 5165 AA	Skil 5265 AA
Power input	1 150W	1 250W
Sawing capacity at 90°	65mm	65mm
Sawing capacity at 45°	42mm	42mm
No-load speed	5 000rpm	5 000rpm
Saw blade max	184mm	184mm
Saw blade min	184mm	184mm
Arbor	16mm	16mm
Weight	3.9kg	3.9kg



Electronic spirit level

Made from strong but lightweight alloy and featuring shock absorbing end caps to reduce damage when dropped, the Stabila type 196-2 Electronic Spirit Level conforms to IP65, which means it is dust- and waterproof. The two digital displays can be illuminated at the push of a button, which makes reading possible in any situation. Display modes include degrees, percent, metres, millimetres, feet and inches, and you can also choose between a fine (0.05) and a rough (0.1) display. If you want to hang something on a wall at a slope of 20 degrees, you punch it in on the spirit level. It will emit a beeping sound every few seconds and, the moment you reach 20 degrees, it emits a continuous beep. The battery lasts about 150 hours. It is available in 60cm, 100cm and 120cm models.

i For more information

Visit: www.upat.co.za
Tel: 011-624-6700

New kid on the block

Makita has added the MTO80E 14.4V Lightweight Lithium-ion Hammer Driver Drill to its Maktec brand. It can drill 10mm holes in concrete, 25mm in wood and 10mm in steel. The mechanical two-speed gearbox makes for speedy drilling in light applications using the high speed mode and, when more torque is needed, the low speed mode is ideal.

The drill features 16 torque settings and a drill mode. The hammer drill action chips away at concrete while the chuck continues to rotate, driving the bit into the material. At high speed it produces 0 to 21 000 blows per minute and at low speed 0 to 6 000 blows per minute. The unit weighs 1.7kg, is supplied with a DC1851 charger, which charges the battery in 60 minutes, and two 14.4V (1.1Ah) batteries.



i For more information

Visit: www.maktec.co.za
Tel: 011-878-2600

The state of electrical plugs in South Africa

The South African plug according to SANS 164 is rated for 16A. Apart from basic fundamental design flaws this plug can never carry 16A continuously safely. A round pin can at best have two lines of electrical contact. More often than not due to production tolerances, only one line of electrical contact is achieved. The resulting contact area can never carry the specified current density safely. A flat contact surface like those found on many overseas plugs, on the other hand, has a much better electrical contact area and is not sensitive to manufacturing tolerances or contact area corrosion.

The safety hazard of the South African 16A SABS plug is further escalated by a total apparent lack of quality control. It is virtually impossible to buy a decent 16A plug today.

What astounds me even more is that there has been a number of articles published such as 'The shocking state of sockets, adapters and portable socket-outlets in South Africa' by Mike Rycroft; *Energize*, EE publishers, March 2011. The resulting responses from the industry were even more astounding. The industry spokesmen

(spin doctors) play with SABS standard's wording all while consumers' lives and properties are at stake.

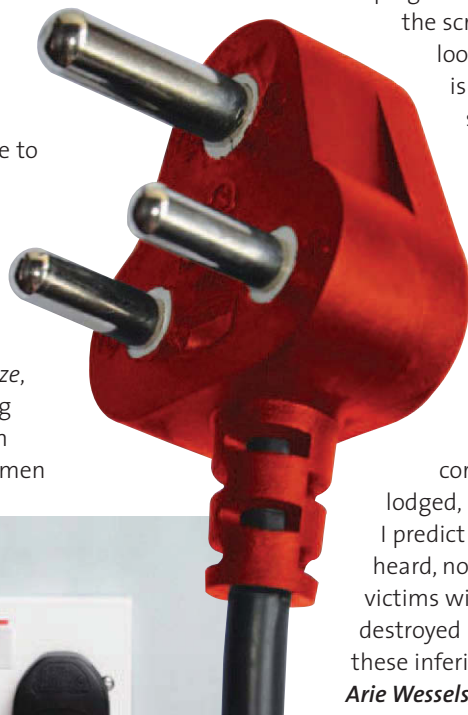
The most glaring electrocution hazard is that the plug top can come off very easily during use, leaving three protruding brass screws exposed. I have seen people trying to extricate these faulty plugs using kitchen knives for leverage. I shudder to think how many electrocutions are as a result of this. The latest trend is more horrifying – using hollow pins presumably in an attempt to save on material. This escalates the overheating of the plug and results in the melt down of the plug top holding the screw thread. The thermal cycling (heating/cooling)

loosens the screws connecting the wires. This heat is also transferred to the wall socket loosening the screws in the wall socket wiring. The resulting bad connections result in thermal run-away that may result in total melt down and fire. The use of cheap non-heat resistant materials for the plug body increases the risk. How many fires have been caused by this?

I have banned these plugs from my home and standardised on the British fused 16A plug for all our high power appliances. The light load appliances are only powered by brand name, commercially made, moulded 15A plug power cords. In the two years since the complaint has been lodged, industry and the authorities have done nothing. I predict that unless we as consumers let our voices be heard, nothing will happen, more innocent victims will be electrocuted and more homes destroyed by electrical fires as a result of these inferior plugs.

Arie Wessels, Randburg

**WINNING
LETTER**



Winning letter

This month's winning query comes from Arie Wessels who wins a Bosch PCM 7 Mitre Saw

Under pressure

Never a month goes by without a visit to the news stand, followed by a cover-to-cover read of this magazine for some of the most useful information on a wide variety of DIY ventures. Having read the 'Safety first' letter in the April issue, I then turned to the next page and read the piece on high pressure cleaners. It brought back a very painful memory and a learning experience to be remembered. Whilst using a high pressure cleaner to clean the car (particularly good on rims), I lost focus (when mishaps usually occur) due to an annoying fly. In an attempt to swat the fly with the flow from the high pressure washer, I brought the full force of the spray across the top of my foot. The result was a deep wound in the shape of the classical HIV/AIDS ribbon; a scar which I permanently carry to this day. Information on high pressure washers rarely mentions the dangers to the user and people/animals in the vicinity. I am only thankful it was my foot and not my or someone else's eye.

Greg Hill, via email



The gift of tools

I grew up in a home where DIY was non-existent. However, I managed to learn loads of DIY stuff as I grew up from neighbours and the like. After school I was an apprentice fitter and turner on the mines and that kind of gave me the headway to learn pretty much everything else. I do woodwork, steelwork, fix cars, rebuild bikes, do electrical repairs and paint. Of my two sons, my youngest started to play with my tools in the garage from a very early age and was always eager to help out. Now at the age of 20 he also does pretty much anything with regards to DIY, including repairs to bikes for extra pocket money (he's a varsity student).

When I was an apprentice, we were issued with state-of-the-art toolboxes from Gedore. I still have all of those tools; they are undoubtedly the best brand available, but they are also almost unaffordable today. So, for my son's birthday I decided to give him a start to his collection of tools and bought him an Ampro 123-piece quarter inch and half inch Dr Professional 3-Drawer Tool Chest. Not the cheapest around, but my reasoning was that this should last as long as possible and over time he would build on it. It also comes with a lifetime warranty, so that was a good motivation.

Needless to say, he is ecstatic with his gift and now takes very good care of his own tools. He's also the one who subscribed me to your magazine for a year on my birthday last year.

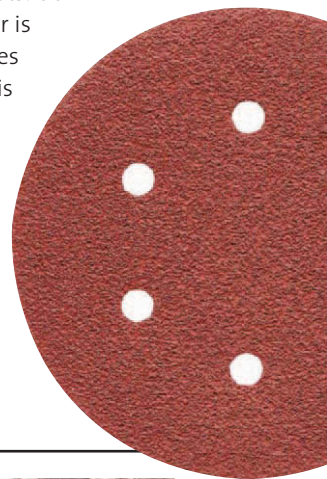
Max Zanette, via email



Looking for a sanding disc

I live in Flame Lily Park Moth retirement cottages. We have a woodworking room where we repair and make new articles which are sold for the labour costs and then the money is given to frail care to help with their costs. Our problem is our disc sander is made of wood and vibrates all over. I wonder if there is a reader of the magazine who might have an old sanding disc that has not been used that can be donated to us or sold at low cost. I can be contacted on 031-463-1054 or 078-971-9918.

Derrick Lloyd, Malvern



WIN!

a Bosch DIY PBS 75 A Belt Sander

Share your opinion

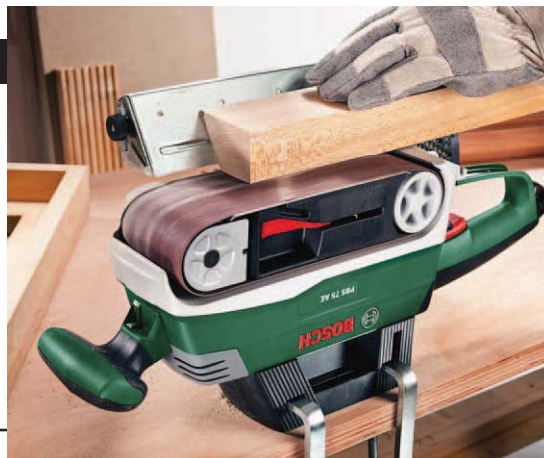
Send us your views, ideas and opinions addressed to *The Home Handyman*:

Email: editorial@homehandyman.co.za

Fax: 011-704-3962.

By mail: PO Box 650484, Benmore 2010

Letters may be edited for length and clarity.



2012 Corobrik Architectural Student Award

University of the Witwatersrand Student, Nontoko Mhlungu, has clinched the prestigious national Corobrik Architectural Student Award for 2012, beating finalists from seven other universities around South Africa to the winning post.

In her thesis entitled *Hillside Sanctuary: Reception centre for the urban refugee*, Nontoko explores a refugee's survival strategies in Johannesburg.

The centre presented in her thesis comprises emergency relief facilities, rehabilitative programmes and transitional accommodation, all encompassed within a spiritual, yet nondenominational, Christian church establishment. This highlights the 'curative' relationship between spirituality, architecture and the user.

The panel of judges, architects Heather Dodd, Sindile Nkonyama and

"The publicity I have received has opened a lot of doors for me and helped me to see architecture in a whole new light"



Nontoko Mhlungu from the University of the Witwatersrand is the winner of the 26th Corobrik Architectural Student of the Year

Source: www.corobrik.co.za

Peter Rich, said Nontoko's thesis is a scheme that explores the spiritual, existential and practical needs of the refugee in Johannesburg.

As the judges felt two more entries deserved commendation, highly commended certificates were awarded to Jarryd Murray from the University of Johannesburg and Norbert Koch from the University of Pretoria.

Speaking after the event on April 18 at the Sandton Convention Centre in Johannesburg, Corobrik managing director, Dirk Meyer, said it had been particularly difficult to select a winner for the 26th Corobrik Student Awards due to the high standard of work that was entered.

Nontoko said that the idea for her thesis evolved from her interest in the fate of refugees following xenophobic attacks in early 2008.

The Central Methodist Church in Johannesburg opened its doors to hundreds of desperate people, many of whom were Zimbabweans, and ultimately ended up embroiled in a lawsuit.

Nontoko was selected as the top architectural student at the University of the Witwatersrand at the end of 2012, receiving a R7 000 prize from Corobrik. Winning the national award means an additional prize of R50 000.

According to Nontoko, winning the regional and national awards has been the highlight of a very positive and rewarding experience. "The publicity I have received has opened a lot of doors for me and helped me to see architecture in a whole new light. This was not just a project. I have also realised that people want to see architects doing things for their communities."

Do you have any DIY industry news or views to share?

Email us at: editorial@homehandyman.co.za



SA saves with earth hour

South Africans achieved a massive 629MW reduction in their electricity usage during this year's Earth Hour, says Eskom.

"As part of its support for the Earth Hour campaign, Eskom measured the reduction in electricity used during the hour between 8.30pm and 9.30pm against typical consumption for this time on an average Saturday evening," the power utility said in a statement.

Eskom had also switched off non-essential lighting at all its offices around the country, except at strategic facilities for security reasons.

Earth Hour started in Sydney, Australia in 2007, when 2.2 million people and more than 2 000 businesses turned their lights off for one hour to take a stand against climate change. Support for the initiative has increased each year.

Last year, Eskom measured an estimated reduction of approximately 402MW during the hour-long campaign - enough electricity to power the city of Bloemfontein. This year's figure suggests that more and more South Africans are seeing the value of switching off what they are not using.

Eskom's support is in line with the 49M energy efficiency movement, launched in 2011, which encourages individuals and businesses to lead energy-smart lifestyles.

Turning off the lights saves hundreds of tons of coal from being burned to produce electricity, so that less greenhouse gases are released into the atmosphere.

Source: *SAnews.gov.za*

Walling it up

The winner of Saint-Gobain Gyproc's local search for the most proficient plastering and drywall systems applicator in South Africa was announced at a prize-giving ceremony held at the company's headquarters in April.

Nineteen-yearold Marvin Lottering from Mitchells Plain in the Western Cape was announced as the winner after an intense three-day battle between the six finalists, all hoping to win the prestigious local competition and the opportunity to travel to Leipzig in Germany to participate in WorldSkills International. At this international event, the winner will compete against young skilled people from around the world, testing himself against demanding international standards.

"Marvin managed to secure his win for a number of reasons," explains judge Peter Harper. "His total approach and overall confidence made him the clear winner. The tasks assigned to the competitors seemed effortless to Marvin, given that he has had limited exposure to the trade since graduating from the Saint-Gobain Academy earlier this year. His completion of the final test was impressive, demonstrating real talent and potential," added Peter. Peter will now take Marvin under his wing and mentor him in preparation for the 42nd WorldSkills International competition, taking place in July 2013.

"I am so happy and honoured to be the winner of the competition," says an excited Marvin. "When I left school I had no idea what I wanted to do and decided that I would enrol at the Saint-Gobain Academy to see if I liked plastering and installing drywalling systems. I loved it, and when I heard about the competition I jumped at the chance to enter," explains Marvin. "I think the reason that I was fortunate enough to win was due to the fact that I planned my time carefully, and kept telling myself that accuracy was key. I would like to thank Saint-Gobain Gyproc for this amazing opportunity, I have never travelled

overseas before and will make the sponsors and my country proud."

General manager of marketing at Saint-Gobain Gyproc Evan Lockhart-Barker congratulated all the competitors on an exceptional job. "We are committed to skills development and I commend all our partners for their involvement in identifying young talent in South Africa, affording them the opportunity to be recognised for outstanding achievement, providing motivation and knowledge that will encourage them to benchmark their skills in plastering and drywall systems applications against global standards."



Marvin Lottering (19) from Mitchells Plain will compete in the International Worldskills competition in Germany in July this year

Marvin will undergo a rigorous programme that will prepare him for his participation in WorldSkills International. "His preparation will include building his confidence levels, refining his technical skills, the importance of planning and using initiative, and problem-solving under pressure. It will also be vital for Marvin to work on his physical fitness as the international competition will require four days of intense work," explains Peter.

Saint-Gobain Gyproc and their partners wish Marvin all the very best of luck for both his preparation for and participation in WorldSkills International.

Wooden flooring

My husband and I bought an old house, which we plan to refurbish ourselves. The floors had Marley tiles on them, which we ripped up. We now want to lay down wooden floor blocks. How do we remove the layer of tar on the cement floors before adhering the wooden floor blocks? We are planing the wooden blocks to remove the old tar on them. Could you also advise on what product we should use to glue the wooden blocks on the cement floors?

Marie Kirkwood, by email

Sharl Bennie, our building expert, advises: It is not really necessary to remove the old bitumen from the floor if you are going to install parquet flooring. a.b.e Construction Chemicals manufacture a product called Grip-A-Bloc, which can be applied on top of old bitumen adhesive. This is a DIY product and is available at most hardware and building outlets. You could also use bitumen to stick the wooden blocks to the concrete floor as bitumen sticks successfully to bitumen. I would, however, recommend that you scrape off the high spots that may be present on the floor. To do this you can use a spade and sharpen the edge of the spade to make it a bit easier.

I recommend that you do some homework and find the gauze matting that is used to bond the wooden blocks together. To lay parquet in individual blocks is no small task. To improvise a frame-type clamp and set them up in mosaic-style sheets is well worth the effort.

Always read instructions before using the product and if in doubt phone the supplier for technical advice. Do not forget to note who you have spoken to, and avoid taking advice from the sales consultant on the shop floor – he has possibly never used the product and his knowledge may not extend beyond what he has read on the container.

For more information contact Sharl on 082-554-1921

Winning query

This month's winning query comes from Theo Adams, who wins an AirCraft Comp Mini A138 Airbrush Kit



Ceiling installation

How do I install RhinoBoard ceilings? I currently have RhinoBoard ceilings but there is no proper support so the ceiling is dropping.

Theo Adams, Fleurof

Sharl Bennie, our building expert, replies: RhinoBoard ceilings require supports at not more than 400mm from centre to centre of each brandering. This is normally a 38mm x 38mm brandering support.

Without a lot more information I do not know what is happening; do they have sufficient brandering but the nails are pulling loose? Are the brandering spaces too far apart? Are the beams too far apart? Beams should be around 700mm apart.



WINNING QUERY

If the nails are pulling loose, then it is relatively easy to repair. Just put in suitable screws next to the nails to secure the boards; do not try and knock in more nails, the vibration from the hammering may cause the ceiling to collapse. The only trick is to follow the brandering.

If it is the brandering that is pulling away from the beams, you can also use screws to secure the brandering to the beams. If the ceiling is hanging, you can prop it up with a builder's jack, but you must have a strip of scaffolding timber between the jack and the ceiling board, otherwise you will punch a hole in the ceiling.

If the brandering spacings are too big, you can always add in pieces of brandering, prop up the board that is hanging and secure the board. Remember that nails are not good for ceilings, it is better to use screws in the ceiling; it may cost a few extra rands, but it is worth the cost.

If the ceiling has been hanging for a long time, you may find that it will not go back into position very easily and, if that is the case, it may be necessary to replace the ceiling board altogether.

For further advice contact Sharl on 082-554-1921

Slate-cutting blades

Which is the best cutting disc to use to cut slate tile, the solid or sectioned diamond steel blade?

Sean Johnson, Swaziland

Willie Gillan from Saint-Gobain Abrasives replies: Diamond blade manufacturing can be referred to as an exact science; however, the application of the blades rarely is. The manufacturing of segments is formulated on the general rule of “the harder the material you are cutting, the softer the segment needs to be”. This is one important part of selecting the right blade. And selection can be quite daunting as all blades look the same. The only difference is what the segment looks like.

The three main segment configurations:

- Segments – segmented blades are the most commonly used. They are used for general cutting (on applications specified by the supplier on the packaging of the blade), where the finish of the cut is not important. The gullets (gaps) between the segments tend to chip the shoulder of the cut (on the material you are cutting), which is generally not a problem, but when cutting tiles it can be aesthetically unappealing.
- Continuous rim – this is the smooth, solid segment that runs around the perimeter of the blade steel. The smoothness of the segment leaves a clean, neat cut with generally no chipping on the shoulder of the cut. This is the most suitable blade for tiles (ceramic or porcelain). Due to the lack of gullets, there

is very little natural cooling that takes place and cutting very dense material or concrete products dry could lead to overheating of the blade. Continuous rim

blades are not recommended for use in masonry and building material. On high density porcelain, it is best to use them with a little bit of water in the cutting area.

- Turbo segment – this is the solid segment that runs around the perimeter of the blade steel, but has the slanted grooves along both sides. This item can be used similarly to the segmented blade (again as per application specified by supplier), but with less chipping. The turbo configuration will still cause some chipping on materials though and is not suited for ceramic or porcelain tiles.

So, based on the above, the first decision is what kind of finish you want on your cut. My suggestion would be a turbo configuration for wet or dry cutting. Alternatively, a continuous rim can also do the job – dry, if the tiles are not too thick and wet if the tiles are large and thick.

After this, a difficult path lies ahead in selecting the right product with the right segment hardness/softness. Norton Abrasives has several diamond blades in different sizes available for cutting slate tiles. My suggestion would be the Super Gres XT Diamond Blade (turbo configuration from 115mm-300mm) or a MD110/ MD120 (continuous rim configuration from 115mm-300mm).

For more information, contact Willie at willie.gillan@saint-gobain.com

Clock movements

I would like to build a clock but do not know where to obtain the clockwork, arms etc. Can you help?

Tinus Nel, Middelburg

Ed replies: You can purchase the clock movements and such online from Cape Watch. Visit www.capewatch.co.za to view their products and place your order, delivery will follow by post or courier service. For more information contact Tennille Hoge directly on 021-424-8261.

Good luck with your clock project and do share your pictures of the finished clock with the magazine.

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Comfort zone

By Loren Shirley-Carr



Insulate your home this winter and keep warm without breaking the bank

As the days get shorter and the mercury drops, so many electricity bills rise with the cost of keeping homes warm. Heaters use a lot of power, and if your home is not insulated properly, much of this expensive heat escapes into the atmosphere, leaving your home inadequately heated.

There are many spots in your home that need to be insulated in order to keep the warmth in, or out, depending on the season. The most effective option is ceiling insulation – according to Eskom, an insulated room requires 51% less energy than an uninsulated one. Other areas to think about are floors, rafters, walls, doors and windows.

There are three main types of insulation, each one suited to specific areas of your home and the nature of the space that needs to be insulated: Bulk, composite bulk and reflective foil insulation. Whichever you choose, make sure it is SABS approved (i.e. the product is an SABS Mark-holder) and that the company is a member of the

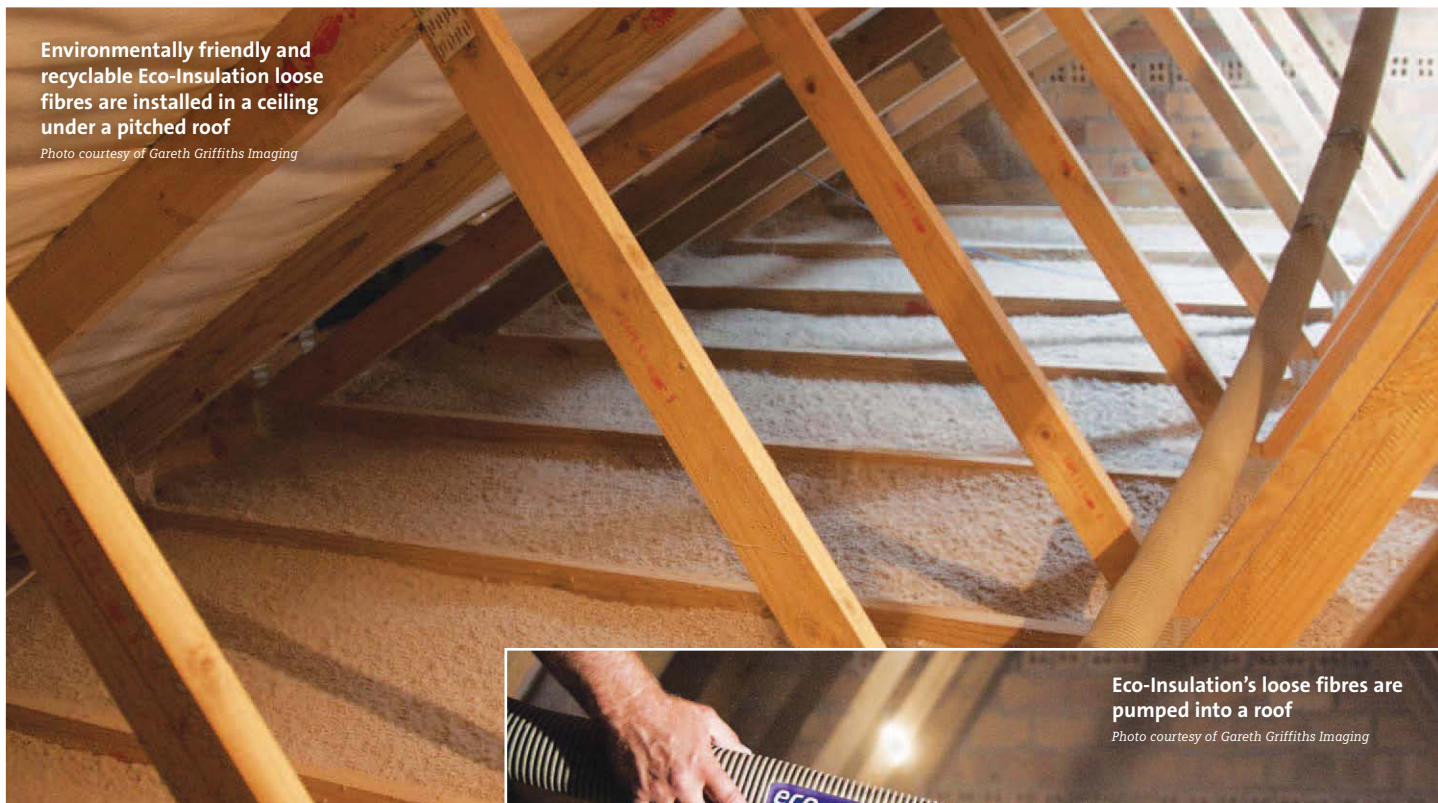
Thermal Insulation Association of South Africa (TIASA). Also take note of its R-value. Insulation products are given an R-value to measure how well it prevents heat from flowing through it. The thicker the insulation, the higher the R-value, and the higher the R-value, the greater the insulating effectiveness. The R-value of thermal insulation depends on the type of material, its thickness, and its density.

Blankets

This is the most common type of insulation and includes fibreglass and glass wool blankets, such as Think Pink (which can irritate the skin while being installed) and polyester fibre mats, which may be made from recycled PET bottles and which are non-irritable. These options are available in blankets, in the form of mats or batts (precut lengths), which are cut to fit a specific space between timber joists in the roof. Batts can be installed by homeowners or professionals.

Environmentally friendly and recyclable Eco-Insulation loose fibres are installed in a ceiling under a pitched roof

Photo courtesy of Gareth Griffiths Imaging



Eco-Insulation's loose fibres are pumped into a roof

Photo courtesy of Gareth Griffiths Imaging

Cellulose loose fill insulation

This type is made up of recycled paper and milled into cellulose, in the form of loose fibres, as offered by Eco-Insulation. These loose fibres are blown in using pneumatic equipment by professional installers. Due to the small size of the particles, cellulose 'flows' well around obstructions such as electrical wires and trusses to give a uniform fill. Once the flow has stopped it rapidly mats together and stays in place. The fibrous material is treated to resist fire and fungal growth. "Eco-Insulation Cellulose Fibre Ceiling Insulation offers one of the most environmentally friendly insulation products around. It uses very little energy in manufacture and is also safe for the humans and pets who live underneath it. It can also be recycled if ever removed," says Richard Ellis, general manager of Eco-Insulation.

Rigid board insulation

This is made from fibrous materials or plastic foams and is produced in board-like forms. It is often used where a high R-value is needed but where space is limited.

It includes:

- Expanded polystyrene (EPS) – a lightweight, plastic foam insulation produced by trapping small amounts of pentane gas into solid beads of polystyrene. Excellent thermal properties, moisture resistant, easy to install, non-toxic and is recyclable.
- Extruded polystyrene (XPS) – a closed cell polystyrene foam board, which retains gas but excludes water. Used in places that experience high pressures, such as below a concrete slab or in built-up roofing.



▲ Extruded polystyrene boards

◀ Expanded polystyrene



▲ RadenShield ClimaGuard is a DIY friendly system whereby the reflective aluminium sheets are stapled to the inside of the roof rafters.

The most effective option is ceiling insulation – according to Eskom, an insulated room requires 51% less energy to heat than an uninsulated room

- Vermiculite is a mineral closely related to mica, which when heated expands to form a lightweight material with insulating properties. The treated material is coated with asphalt to make it water repellent for use in high moisture areas. It is usually hand-installed, is non-combustible, odourless and non-irritating, although due to its high density it is not usually the material of choice where a high R-value is required.

- Polyurethane Foam is sprayed as a liquid, which expands to fill space as it dries. For small applications, single component foam is available in spray cans for sealing around windows and doors.

Reflective foil insulation

This type of insulation resists heat flow due to its reflective properties, low radiant heat absorption and low emissivity (ability to re-radiate heat). It is made up of aluminium foil and other components. It is, however,

Installing reflective foil insulation

Here is a step-by-step guide to installing RadenShield ClimaGuard insulation. You will need a measuring tape, scissors, ladder and staple gun:

Step 1: Use your ladder to access the roof space. Measure the distance from the area where your roof meets the outside wall (wall plate) to the top of the ridge (apex). Add 300mm to this for the overlap that you will later make at the apex. Measure the total distance that you need to cover and divide this by 750mm (the width of your ClimaGuard roll) to determine the number of lengths you will need. If you have a concrete tile roof, you can simply count the number of spaces between the trusses as they should all be about 760mm between rafter centres. Once you have calculated how many lengths you will need, you are ready to move on to the cutting stage.

Step 2: Use a large even area on the ground to cut the required number of lengths from your ClimaGuard rolls. When you have done this, roll each length into smaller, easy-to-handle rolls and return to the roof space.

Step 3: Starting at the bottom of the rafter (wall plate) and working upwards to the top (apex), staple ClimaGuard to the insides of the rafters and the undersides of the cross battens that hold your roofing cover in place. You should have 300mm extra on top, which must be used for an overlap before the opposite length is installed. If you have to join two lengths, ensure that you have at least a 100mm overlap.





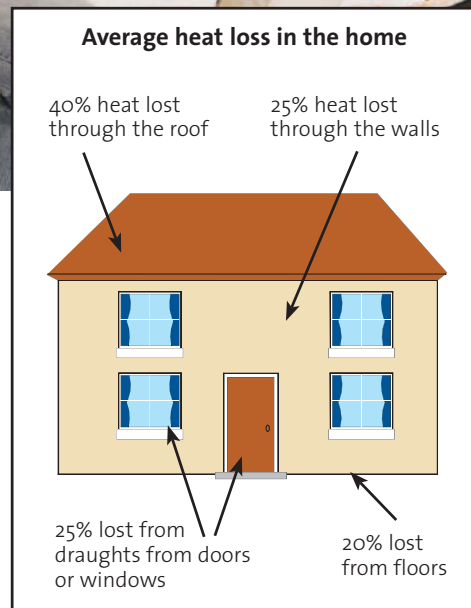
Blankets are the most common type of insulation and include fibreglass and glass wool blankets, such as Think Pink which can irritate the skin while being installed

more effective in reducing heat in summer than keeping in warmth in winter, although it does keep the home comfortable in winter.

There is a DIY product available from Coverland called RadenShield ClimaGuard, perfect for if you want to install insulation yourself. RadenShield is manufactured from non-woven polypropylene spunbond membrane that is laminated to highly reflective aluminium sheets, resulting in great insulating properties. It can be retrofitted to an existing roof without you having to remove any tiles. Says Willem Grové of Coverland, "In essence, RadenShield Climaguard is stapled to the inside of the rafters in the roof cavity. Instructions on pack inform you how to attach the insulation." (See box on previous page). This insulation is said to keep your home up to 10°C cooler in summer, and retain heat in winter.

Composite bulk insulation

This is a combination of bulk insulation and reflective foil, and includes foil bonded to bulk insulation, weather blankets or boards.



Ceilings

In uninsulated homes, approximately 40% of heat is lost through the roof. Insulation slows this heat transfer and makes your home up to 10°C cooler in summer and 5°C warmer in winter, according to Eskom.

Options include cellulose fibre loose fill, flexible fibreglass, glass wool or polyester blankets and natural fibre. For over rafters, consider aluminium foil laminate, polyethylene foil laminate or composite bulk insulation.



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Draughts from doors and windows

Draughts moving through a house can quickly suck the warmth out of rooms. In winter, draughts account for up to 25% of heat loss, according to Eskom. Reducing these draughts can save you money and keep you cosy in cold weather. You can draught proof doors and windows by sealing cracks and gaps, as well as unnecessary vents and unused fireplaces.

Floors

About 20% of a home's warmth is lost through the floors in winter. Floors can be insulated with flexible fibreglass or polyester batts, rigid expanded polystyrene (EPS) or extruded polystyrene (XPS), rigid polyester fibre or polyurethane board. Eco-Insulation can be installed underneath wooden floors.



It is a good idea to insulate walls to prevent heat loss



You can draught proof doors and windows by sealing cracks and gaps

Walls

Depending on the construction of your home, walls can account for up to 25% of a home's heat loss in winter. Walls can be insulated with a thermally insulating plaster (Pratliperl), fibreglass or polyester batts or boards, rigid expanded polystyrene (EPS) or extruded polystyrene (XPS), rigid polyester fibre or polyurethane board. ✱

Sources:

The Thermal Insulation Association of South Africa, www.tiasa.org.za

Eco-Insulation,

www.eco-insulation.co.za,

021-555-3766

Coverland, www.monier.co.za,

011-222-7406

Saint-Gobain Isover, www.isover.co.za

Eskom, www.eskomidm.co.za



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The line of fire

We look at fire safety in the home – from preventing fires to ensuring that you have the right firefighting equipment in case of an emergency

By Gina Hartoog

In a strange twist of fate, the day before I planned to write this article, I nearly burned down my own kitchen! I stupidly took a pot of burned vegetables off the stove and put it down on a kitchen dishtowel. I was so focused on my burned dinner and how I was going to fix it that I didn't give fire safety a thought. The dishtowel caught alight and, yes, I had a fire on my hands.

'Not thinking' is probably a major cause of house fires. We are so busy with our daily tasks that we don't consider how easily a fire can start or really know how to handle one when we are faced with a raging inferno. Everybody needs to take the threat of fire seriously. It can happen in your home!

Fire safety in winter

In under half a minute, a seemingly small fire can become major fire that quickly escalates out of control. While lives and property are in danger from the fire itself,

the heat, smoke and gases that are emitted from the fire are just as dangerous.

With the winter temperatures dropping and with electricity costs rising, many South Africans are looking for alternative ways to heat their homes this winter. The use of gas stoves and gas heaters are increasing and wood and charcoal are popular choices.

According to Chubb Fire and Security South Africa, all these methods of heating may be acceptable but they are a major contributing factor in residential fires. "We are all guilty of bringing out the extra heater, dusting it down and turning it on without rechecking that it is fully safe, and it is all too easy for people to become complacent and not take adequate precautions to prevent a fire in the home, the consequences of which can be devastating," says Bridget Aves, regional managing director of Chubb Fire and Security in KwaZulu-Natal.

Causes of fire in the home

- Faulty electrical wiring.
- Candles left unattended.
- Kitchen fires.
- Overloaded plug sockets.
- Heaters in winter (left unattended or used irresponsibly).
- Fireplace left unattended or without a screen guard.
- Faulty electrical equipment (irons, toasters, electrical blankets).
- Children playing with matches or a lighter.
- Careless smoking (especially in bed).
- Improper storage of flammable liquids.
- Braai fire that gets out of control.

Prevent fire in your home

The first step in fire safety is to prevent a fire from starting in your home. While it may seem like common sense, there are many things you may overlook in your home that could lead to a fire. Chubb has the following guidelines for fire prevention:

- Never overload electric circuits or extension cords and replace faulty and frayed cables immediately.
- Ensure electric blankets and heaters are not left on overnight or unsupervised.
- Children under the age of five are naturally curious about fire - take the mystery out of fire by teaching them that it is a tool and not a toy.
- Ensure night lights and lamps are not touching bedspreads, curtains or other fabrics.
- Turn off portable heaters, as well as gas and electric fires before going to bed.
- If you have an open fire, you should use a fire screen every time you make a fire.
- Keep heaters away from furniture and curtains.
- If you have gas, oil or coal-burning appliances, be aware of carbon monoxide. Ensure your home is properly ventilated and equipment is regularly serviced and maintained.

Fire detection and safety equipment

The second step in fire protection in your home is to ensure that you have fire safety equipment to alert you to a fire and/or alert your security company (if your system is linked) as well as some firefighting equipment to put out a small fire before it gets out of control.

Bridget Aves says that the loss of life and property resulting from fires, whether caused by arson, heating methods or badly installed equipment, can be prevented by installing a fire alarm system, smoke detectors, sprinkler systems and carbon monoxide (CO) detectors. "While the main focus of fire protection strategies is to prevent fire, early automatic fire detection is essential to help you contain a fire in the event of one accidentally breaking out," says Bridget. "Servicing and maintaining these systems is a legal and insurance requirement."

Fire equipment is essential in the home and saves lives, but if you don't know how to use the equipment or if it is faulty, it is useless.

Smoke detectors and alarms

These alert you to a fire in your home.

They sound an alarm that is loud enough to wake you from sleep. Some systems are connected to your alarm system and will send a signal to your security company alerting them to the fire.

Small, wireless smoke detectors are relatively inexpensive and should be placed on each level of your home, close to bedroom doors and in any outbuildings. Always read the instructions carefully and know how your product works. Some battery-operated products will emit a beeping sound when the batteries need replacing. Devices should also be tested regularly. Everyone in your home should know the sound the fire or smoke alarm makes. Products older than 10 years should be replaced.



▼ Yale smoke detector



▲ The Yale Biometric Digital Door Lock has an integrated fire safety feature and will unlock and sound an alarm if the temperature in the room exceeds 60°C

▼ Yale 6000 Series Wire Free Alarm System



You can add a smoke detector assessor to the Yale 6000 Series Wire Free Alarm System (DIY-friendly). If a fire is detected, a signal is sent to the control panel, which emits a different siren to the alarm/panic tone. A signal is also sent to the armed response company, alerting them that a fire has been detected.

The Yale Biometric Digital Door Lock uses three methods of unlocking - fingerprints, a pin code and a mechanical key. The door lock also has an integrated fire safety feature. Should your home catch alight, the digital door lock will unlock and sound an alarm if the internal temperature reaches 60°C. Yale products are available from select retail outlets, Yale Security Point stores, Yale Express stores or online. For information, log on to www.yalelock.co.za.

Gas detectors

A carbon monoxide detector detects carbon monoxide (CO), an odourless, invisible gas that can kill in minutes! The detector measures levels of CO and an alarm will sound before dangerous levels are reached.

Yale also has an LP (butane and propane) and natural (methane) gas detector. The detector is an early warning device that detects the presence of dangerous or ignitable LPG or natural gases where they are present over general safety levels. The device features LED visual notification and an audible alarm when gas safety levels are exceeded.

Fire extinguisher

Every home should have at least one fire extinguisher. Two extinguishers are a better safety option. Keep one in the house and one in the garage or one on each floor of a multistorey home. Fire extinguishers should be kept in an easy-to-reach place, ideally near the kitchen. Everyone in your home should know where they are stored.

Fire classes and types of extinguishers

Fires are placed in different classes so the correct fire extinguisher can be selected to fight the fire.



Class A: Wood, paper, fabric, rubbish, plastics, cardboard and solid combustible materials that are not metals.

Class B: Flammable liquids like fuel, kerosene, grease, paint or any non-metal in a liquid state.

Class C: Flammable gases like methane and propane.

Class D: Flammable metals.

Class E: Electrical equipment.

Class F: Cooking fats and hot oils (catering equipment).

Types of fire extinguishers

1. Carbon dioxide

Class B, C and E fires.

2. Dry chemical powder (DCP)

Class A, B and C fires (suitable for household use).

3. Water

Class A fires.

Source: Lance Tempest of Tempest Fire



To fight a fire you need the right type of fire extinguisher – a 4.5kg DCP extinguisher is suitable for home use



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LPG and Natural Gas Detector

With increasing electrical costs, more people are moving towards alternate energy sources such as gas. There is still, however a fear of gas and the risk of suffocation or even dangerous explosions due to gas leaks.

The Yale Gas Detector is an early warning device which activates an ultra-loud 85dB alarm and LED warning lights when it detects the presence of dangerous and ignitable LPG or Natural gas, where these gases are present over general safety levels. To ensure maximum safety, this gas detector complies with the EN standard EN 61010-1:2010 as well as SABS safety standard requirements.

It is vitally important to install your gas detector at the correct mounting height for detection, as these two gasses react differently in their natural state (LPG sinks and Natural gas rises). Plug sockets are not traditionally installed 30cm down from the ceiling or are strategically located close enough to where you would ideally like detection to occur. For this reason, the Yale Gas Detector is pre-fitted with a 1.5m power cord, making installation a breeze. No need to call an electrical installer... Periodic maintenance is also an important factor for all gas detection products. Installations are often near cooking areas where airborne dirt and grime build-up occurs which in turn affects detection. The Yale Gas Detector has a removable grill which is easy to clean to ensure efficient detection all year round.

For more information, please contact

Yale Security (SA) Pty Ltd:

Tel: 011 761 5000

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Fire extinguishers contain different firefighting agents – carbon dioxide, water and dry chemical powder, and each agent is used to put out a different type of fire (see block). D, E and F class fires are rarely seen in a domestic environment. A 4,5kg DCP extinguisher is the best for home use. It is affordable and relatively lightweight, so it is easy to handle by most adult family members. Also consider a small 1kg fire extinguisher for your car. Fire extinguishers should be checked regularly. Buy a quality product with the SABS mark (SANS 1910).

To use a fire extinguisher, pull the pin. Aim the extinguisher at the base of the fire. Squeeze the top handle or lever and sweep from side to side. All adults in the house should know how to use a fire extinguisher. For more information, visit the Tempest Fire website at www.tempestfire.co.za.

Fire blankets

A fire blanket is a simple product that can be used to quickly extinguish a small fire. Fire blankets are manufactured from lightweight sheets of a fire-resistant material. Small blankets suitable for home use are usually manufactured from fibreglass. They are very effective in putting out kitchen fires caused by cooking oil and should ideally be kept in the kitchen.



Sprinkler system

In the past, fire sprinkler systems were only used in large commercial buildings, but they are now playing an important role in fire safety in the home. Sprinklers are attached to the roof and connected to a water supply system. Each sprinkler has



▲ A fireproof safe from Mutual Safe & Security

a heat sensor element which detects a rise in temperature. When the pre-determined temperature is reached, the system activates and releases water. Sprinkler heads are rated according to their



◀ The Yale Fireproof Data Safe has a keypad that offers a three to 12 digit user code and a possible one billion combinations

release temperature. The cost of the system will depend on how many sprinklers are fitted and how big your home is. Systems should be installed by professionals. The product must be approved by the Automatic Sprinkler Inspection Bureau (ASIB).

Fireproof safe

Thousands of important documents are lost in fires every year. It makes sense to protect your important paperwork in a fireproof safe. You can also purchase a fireproof safe for computer equipment. Mutual Safe & Security has a variety of products to suit your needs. Visit the website at www.mutual.co.za. The Yale Data Fire Safe is developed using the latest technology in fire insulation and ensures one hour of fire protection for documents and a touch interface keypad for the latest in digital locking technology. ✕

Surviving a house fire

- In addition to having some firefighting equipment in your home, you should have a fire escape plan in place. Every member of your household should have a clear idea what to do if your smoke detector or fire alarm goes off. This is extremely important in South Africa where, due to security reasons, most windows have fixed burglar guards. Your family needs to know what to do, how to get out of the house and where to meet.
- Have two plans in place. This is essential as one route may be blocked by fire in that section of the house. If you have a young family, have a practise run. It won't frighten the kids – they have fire drills at school too.
- Always display your local fire station and emergency telephone numbers where everyone in your family can find them.
- In the event of fire, make sure everyone is awake. Get everyone out of the house as fast as possible.
- If a door handle is hot to the touch, do not open it.
- Teach older children and teenagers to crawl low on the ground if there is thick smoke. Assist babies, toddlers and younger children.
- Have a meeting area outdoors, well away from the house.
- Leave personal belongings behind!
- If your clothing catches fire, stop, drop and roll (outside).
- While it is essential to try and get the fire department to your property as quickly as possible, only make the call once you are out of the burning house. Consider the benefits of a smoke alarm and fire detection system – while you are getting your family out of the house, the security company would already know about the fire and help would be on the way.

All about applicators

Don't get into a sticky situation... take a look at our guide to the various DIY and professional applicators available to make your sealing job a smooth one

By Roelof Strydom

Using a manual applicator

Retract the plunger by pressing the thumb plate and pulling the plunger back as far as it will go. Feed the nozzle of the cartridge through the hole at the end of the gun so that the cartridge fits into the collar. When using a bulkfill (closed barrel) applicator, simply unscrew the black ring, place the cartridge in and replace the ring. Then press the trigger and repeat until the plunger enters the hollow at the rear of the cartridge.

How manual applicators work

The sprung trigger is used to feed the plunger down the gun and apply pressure to the cartridge, thus pushing the sealant through the nozzle. To release the pressure, you need to press the thumb plate and pull back on the plunger.

>>>



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- 1 x Den Braven Universal Silicone 1001 Cartridge
- 1 x Den Braven Acryl-W Cartridge



For more information

Visit: www.denbraven.co.za
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1. Blue half-barrel

The blue half-barrel applicator is an entry level and easy-to-use sealant and adhesive applicator. It is used to apply low viscosity silicones, sealants and adhesives. This applicator is not recommended for day-to-day use as it won't be able to cope with the demands. It is fine for applying sealant around baths, kitchen sinks and in showers every now and then.

Recommended retail price is R30

2. Chrome applicator

The chrome applicator is a step up from its blue half-barrel counterpart. Although it looks almost the same as the blue half-barrel, there are some distinct improvements. Where the blue half-barrel applicator is made from 0.5mm stainless steel, the chrome applicator is made from 1mm stainless steel. You might think half a millimetre can't make that much difference, but the difference is quite evident when you pick up the chrome applicator. The chrome version is much heavier than the blue half-barrel version and much less flimsy.

The biggest improvement on the chrome version is the plunger, which has a serrated edge for the entire length of the plunger. The serrated edge along with the handle mechanism allows for better control when applying sealants. Unlike the blue half-barrel version, which has a thumb trigger to release the plunger, the chrome version's plunger needs to be rotated 180° to enable the release of the plunger. This applicator is ideal for DIY'ers who need to apply low viscosity silicones, acrylic sealants and adhesives in and around the home on a more regular basis.

Recommended retail price is R45

3. Cox HKS 400

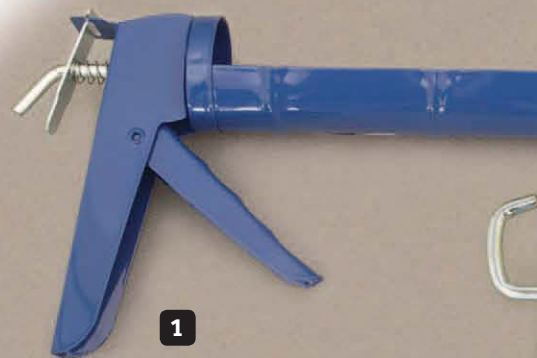
This applicator is for the more serious DIY'er who wants to apply sealant and adhesive on a more frequent basis. It is a high quality extruder gun and can be used with 310ml and 400ml cartridges. The Cox HKS 400 features a hexagonal plunger and a much improved trigger mechanism as well as a thumb release trigger.

Recommended retail price is R85

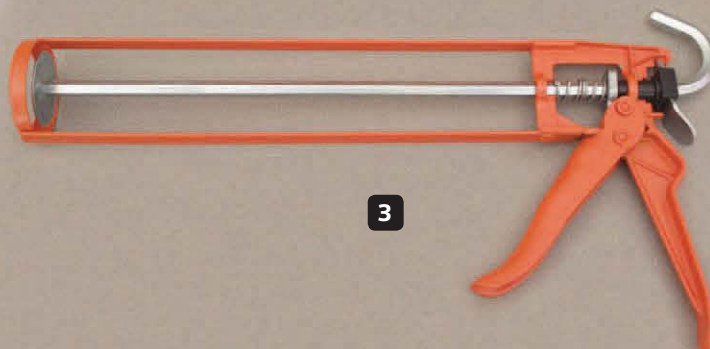
4. Skeleton MK310

The Skeleton MK310 is the go-to applicator for tradesmen and industry professionals who require a heavy-duty sealant applicator. This professional model has a high quality trigger mechanism, enabling the precise application of low and high viscosity sealants or adhesives. The MK310 feels solid and has no flimsy parts, indicating that it will be able to withstand the high demands of day-to-day sealant application. It can be used with polyurethane, silicone, acrylic and adhesive cartridges.

Recommended retail price is R300



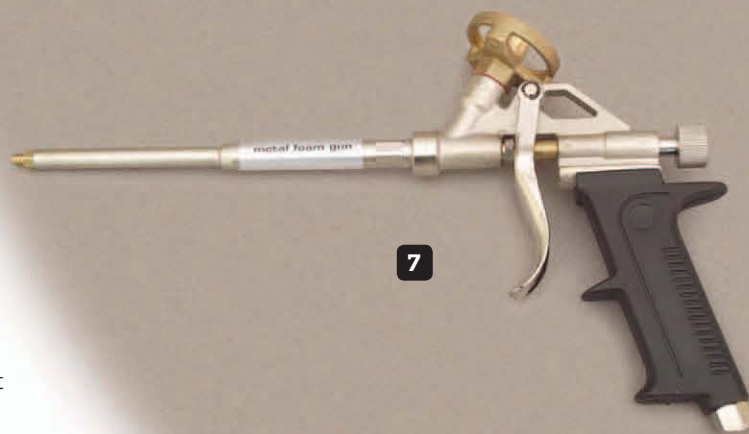
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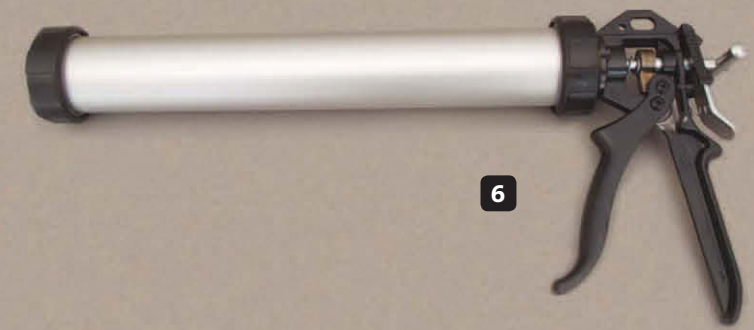
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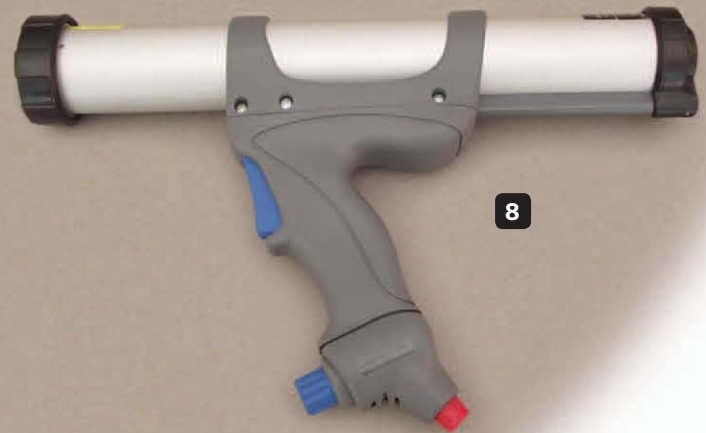
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5. Bulkfill H310

The Bulkfill H310 is a shortened and ergonomically designed version of the Bulkfill H600. It has the same high quality handle and trigger system as the H600. It can also be used for industrial purposes in the application of polyurethane, silicone, acrylic and adhesive cartridges. Recommended retail price is R420

6. Bulkfill H600

This is a heavy-duty professional sealant applicator gun intended for industrial use. This gun has the same high quality trigger mechanism as the Skeleton MK310 model. It is used to expel polyurethane sealant from the 600ml foil packs. A specific nozzle goes with this model and fits snugly into the front of the gun to enable precision application. Recommended retail price is R620

7. Gun foam applicator

This gun is designed for use with polyurethane foam for the sealing of cavities that are common when mounting and fitting windows, door frames and roofs. It is specifically designed for the controlled flow of expanding foam. Recommended retail price is R640

8. Cox Air MK5 P600

Like the Bulkfill H600, this is a pneumatically powered applicator designed for the continuous application of sealants. Unlike other applicators, where the user continually needs to re-press the handle to expel more sealant or adhesive, this model enables the continuous flow of material by pressing the button once and holding it in. Like Bulkfill, it has a nozzle that fits into the front end to allow for easy and precise application of material. Polyurethane sealant in the 600ml foil packs is applied by means of this applicator. Recommended retail price is R2 000



◀ The various nozzles to be used with the Bulkfill H600 and H310 as well as the Cox Air MK5 P600 to achieve different bead sizes

Some like it hot!

Heating water for use in the home is a costly business. Weigh up your options and discover the most efficient and cost-effective ways to heat your water

Hot water is a luxury that many South Africans take for granted, but did you know that the appliance that consumes the most energy in your home is your geyser? According to Eskom, the hot water you use for cooking, bathing, washing the dishes and doing the laundry makes up between 30-50% of your monthly electricity bill.

But it is not all bad news; there are ways to reduce your hot water usage in order to save money and the environment, as well as other products you can use, such as solar water heaters and heat pumps, which will do the same job more efficiently than your existing geyser.

Find out how to make the most of your geyser, as well as the benefits of alternative water heating systems.

Geysers

What is a geyser?

Many homes in South Africa are fitted with traditional electric water heaters, known as geysers. According to Kwikot, these are high pressure vessels in mainly 400kPa and 600kPa working pressures. The inner vessels are manufactured from mild steel with a polyurethane filling between the inner vessel and outer casing, which acts as an insulation to reduce heat loss. The outer casing is made of galvanised sheeting. Geysers are fitted with an element and thermostat, anode or anodes, safety valve and draincock.



▲ The geyser uses the most energy in the home (Pic courtesy of Kwikot)

Savings

With the rising cost of electricity and need to conserve energy, electricity has increasingly become an unviable means of heating water. However, there are ways

Fact or fiction?

Kwikot dispels some common myths related to geysers:

- **More electricity is used when a geyser is switched on and off compared to leaving it on.**

The standing loss for geysers is determined from SABS 0151 and is typically 2.59kWh per 24 hours for a 150 litre geyser. This assumes that the geyser is not used and is storing the water at the thermostat set point. If the geyser is switched off, the water temperature will reduce by approximately 10°C over 24 hours. If the water is used at the lower temperature, then a small saving will be achieved. If the geyser is switched on and allowed to heat up to the original temperature, then no saving will be achieved. It does, however, not use more electricity when switching on or off for long periods.

- **Switching the geyser on and off will cause the thermostat to be damaged.**
The thermostat by nature of its operation is switching on and off all the time. No damage will occur if the geyser is switched on and off by the user.
- **Switching the geyser on and off will result in cracks in the geyser.**
This is not so as the thermal shocks during normal operation are much greater than the slow cooling when the geyser is switched off and allowed to cool.
- **When a geyser blanket is used, the geyser doesn't need to be switched off.**
The thermal blanket has the potential to save 20% of 2.59kW, which is 0.52kW/day. In addition, if the water is allowed to cool and used at the lower temperature, a further small saving will be achieved.

- **A geyser covered with a geyser blanket can overheat and explode or catch fire.**

Provided the correct materials are chosen for the blanket, there is no risk of fire or explosion. All the blanket does is reduce the temperature loss to the atmosphere, and the thermostat controls the water temperature. The final control set point remains the same inside the geyser, regardless of whether there is a blanket or not.

to get the most efficient use out of your existing geyser. Follow Eskom's tips:

- Optimise electricity efficiency by fitting your geyser as close as possible to the points where the hot water is being used.
- Save money and decrease the load on the power grid by turning your geyser down to 60°C and switching it off before you leave for work. You only need to turn it back on again when you go to bed. There are geyser timers available that control the time that your geyser switches on and off, saving you the worry and hassle of remembering to do it yourself. When selecting a timer, consider a seven-day digital 20A timer as hot water usage patterns can differ on certain days.
- Insulate your water pipes and wrap your geyser in a geyser blanket.

Solar water heaters

What is a solar water heater?

Solar water heating uses the sun's energy to heat water. A solar water heater can be plumbed to add volume to your existing geysers or even replace them altogether. Experts at Kwikot explain that high pressure solar water heaters are similar to traditional geysers and have the same components, including an element and thermostat, however they only have a working pressure of 400kPa.

A solar water heater can be installed with a flat plate solar collector or collectors, or with an array of vacuum tubes, also known as evacuated tubes. The solar installation can either be the thermosyphon circulation method, also known as the close coupled method, where the flat plate solar collector or collectors or array of vacuum tubes are installed on the roof (or on a stand in the case of flat roof homes), with the solar water heater mounted above (higher) than the flat plate solar collector or array of vacuum tubes. This method operates on the basic principle of physics; when a liquid is heated it becomes less dense and rises.



When installing a solar system, ensure that the flat plate solar collector/s or array of vacuum tubes are installed on a north-facing roof so that no shadows fall on them between 10am and 4pm

(Pic courtesy of Kwikot)

Alternatively, the pumped circulation method, also known as the split method, can be used where the flat plate solar collector or collectors or array of vacuum tubes are installed on the roof and the solar water heater is installed inside the roof or at a lower level than the



◀ A solar collector panel
(Pic courtesy of Kwikot)



▶ An indirect solar water heating system is ideal for frosty areas
(Pic courtesy of Kwikot)

flat plate solar collector or array of vacuum tubes. A circulating pump is used, powered by a photovoltaic solar panel. Kwikot markets a variety of different systems, a direct system for frost-free areas and a direct and indirect system for frosty areas.

Savings

According to Eskom, solar water heaters can help save water heating costs by reducing the amount of gas and electricity needed to heat water. Solar energy is not affected by the current shortage of electricity and does not stop providing hot water during load shedding. A solar water heater can provide between 50-90% of your total hot water power requirements, depending on the climate and model of heater. Considering that an electric geyser uses on average between 30-50% of your household's monthly electricity bill, you can reduce that percentage of your electricity consumption by up to 70% by replacing your conventional geyser with a solar-powered system.

Solar water tanks are also better insulated than traditional geysers as they have more polyurethane filling, keeping

water hot for a longer period of time. This ensures that there is always a tank full of hot water (and a backup of hot water) in the early evenings or mornings – provided the tank size is correct. An electrical backup system is allowed on the programme provided it has a timer switch that ensures it does not operate during Eskom's peak demand periods.

Eskom offers a rebate to assist homeowners to convert to solar. For more information about the rebate and its conditions, visit www.eskom.co.za/idm.

Heat pumps What is a domestic heat pump?

The easiest way to describe how a heat pump works is an air conditioner that uses heat to heat water. Kwikot explains the more complex workings of a heat pump as follows: Electricity consumption is only used to transfer heat from the surrounding environment, such as air. The heat pump absorbs this heat (it doesn't create heat) and transfers heat by means of a refrigerant, which captures the heat in the ambient air and transfers it to heat water.

A heat pump is installed on an outside wall closest to where the traditional electric water heater is installed in the roof and normally at the same height. It is connected to the electric water heater by means of copper piping and has to have its own electrical supply and circuit breaker on

the DB board. The heat pump has a built-in circulating pump and control panel. The micro-computer control panel with timer function automatically starts and stops the heat pump according to the water temperature and temperature setting.

Kwikot markets three heat pump units for household application: A 3.5kW unit for traditional electric water heaters (100 litres and 150 litres), a 5.5kW unit for traditional water heaters (200 litres and 250 litres) and a 7kW unit for light commercial water heaters up to 450 litres.

Savings

A heat pump can potentially cut your water heating costs by up to 67% compared to a regular geyser, depending on the variables of your situation, says Eskom. The payback period can



be as short as two to three years from date of installation.

According to Kwikot, heat pumps are one of the most efficient hot water heating systems available as they utilise the solar heat stored in the surrounding environment. This free energy provides approximately 75% of the heat pump's heating energy and only approximately 25% of external energy is required in the form of electricity usage in order to achieve a heat output of 100%.

They provide the same amount of hot water at a third of the cost when compared to traditional electric water heaters. They work in all weather conditions and even at night, so you are not limited to water that

A heat pump can potentially cut your water heating costs by up to 67% compared to an electric geyser

(Pic courtesy of Cobra Watertech)

Keeping out of hot water

- Shower instead of bath; showering uses less hot water and hence less electricity. Also install an aerated showerhead to save on water.
- When bathing, first let in hot water and then adjust the water temperature by adding cold water. Also, use the cold water that first comes out the hot water tap in the bath before the hot water emerges instead of letting the cold water run down the drain. Do not overflow the bath.
- Take shorter baths to avoid having to keep on topping up the bath with hot water.
- When shaving, fill the basin with the amount of hot water you need rather than allow the tap to run.
- Run your washing machine on cold or, if you must use hot water, reduce the temperature setting to 40°C. Also wait until you have a full load before you run the machine.
- Use the cold tap to rinse vegetables, fill your kettle or wash your hands. Only use hot water when absolutely necessary.
- Avoid rinsing dishes under a running hot water tap – fill another sink or a tub with cold water to rinse dishes.
- Fix leaking hot water taps – these can waste up to 18 litres of water a day.

has been heated by the sun's rays or by an electrical element.

Eskom also offers rebates on residential heat pumps – for more information visit www.eskom.co.za/idm.

Solar power or heat pump?

While both solar and heat pump technologies have vast energy efficiency and environmental benefits, your choice is likely to depend on the money you are willing to outlay for the initial purchase as well as the projected savings and payback period you want. Do your research properly by consulting with reputable suppliers of heat pumps and solar heating systems to help you weigh up your options and make the choice that is right for you. ✖

Sources:

Eskom, 08600 Eskom (08600-37566) or visit www.eskom.co.za

Kwikot 011-897-4600 or visit www.kwikot.co.za

Cobra Watertech, 0861-21-21-21 or visit www.cobra.co.za



▲ Heat pumps utilise the solar heat stored in the surrounding environment, making them an extremely efficient hot water heating system

(Pic courtesy of Kwikot)



Time to brush up!

Winter is a good time to do maintenance, including freshening up walls with paint. Choosing the right roller or brush is just as important as the coat you will use



The first thing you need to do is find out which type of brush is suited to the job at hand and the paint being used. There are three main types of paint brushes: Those made with natural-hair bristles, those made with synthetic materials (usually nylon or polyester) and those made with a blend of natural hair and synthetic materials.

Traditionally, natural bristle brushes are preferred for use with solvent-based (oil- or alkyd-based) paints, especially for enamel or finish work. Natural bristles are hollow and can absorb the water contained in a latex paint, causing them to swell and become soft and limp (similar to your own hair when it is wet).

Most synthetic brushes work well with both latex and solvent-based paints, but always check the manufacturer's recommendations on the brush. Some of the solvents used in solvent-based paints can break down the composition of synthetic bristles; once again check the label.

The same above rules to choosing the right paint brush apply when choosing a paint roller: Synthetic versus natural (wool).

Paint brushes – quality versus cost

High quality or more expensive brushes have distinct advantages over the cheaper ones. First of all, a high quality brush will finish the job more quickly. This is because a top quality brush has the ability to 'hold' more paint in reservoir, which means you will spend less time 'painting the can' than applying the paint to the surface.

A top quality brush will also not shed bristles because of how firmly the bristles are seated in the ferrule (the metal band that attaches the bristles to the handle), and because of the material used as plugs in the ferrule that bond the bristles in the ferrule, add taper to the bristles, and create 'wells' in the centre of the bristles to hold paint in the ferrule.

Also, a top quality brush will have a tapered end, which means there are shorter bristles on the outside and longer bristles in the centre. Tapered bristles give the painter more control over where and how much paint goes onto the surface, which is important to consider when choosing the right paint brush.

A good quality paint brush will benefit your painting project with an overall better



finish. Your time spent will also reduce as you are likely to apply less effort with easier cutting-in for those tight areas. Less bristle or filament shedding will also help and there should be no unsightly brush streaks (also dependent on the skill of the user!).

Paint rollers

The fabric on a roller is referred to as pile or nap. The nap type and length determines the finish, with the longer nap often leaving a pattern on the surface. The choice of roller is dependent on the type of paint being used and the surface being painted.

Solvent-based paints are generally applied with a short pile mohair roller onto smooth surfaces.

Water-based paints are generally applied with sheepskin, blended synthetic or foam rollers.



Note!

Velour rollers, or foam with a light orange/pink membrane, are increasingly popular and result in a finish close to that of a sprayed application when using non-drip polyurethanes or enamels.

Long pile is used for rough surfaces, foam is used for smooth and semi-smooth surfaces and medium pile is used for semi-rough and textured surfaces.

Choosing a good quality roller

Run your hand over the roller to see if it sheds any lint. If it doesn't, it is probably a good roller.

Check both ends of the roller to see if there is any fabric hanging over either end. Good quality rollers are bevelled and there should be no overhanging fabric.

Look for the seam in the roller. If you don't see one, then it is probably a good roller. If you see any gaps in the roller or loose backing at either end, it probably means the roller is of inferior quality. The quality of the fabric together with the method used to manufacture a roller impacts on the quality of the end product and ultimately on the quality of the paint job.

A good quality roller will save you time and produce a better finish. Quality rollers hold more paint and allow for an even film thickness (they level the paint finish without shadows or valleys). Cheaper rollers often result in a number of coats having to be applied, which is costly and time consuming. A good paint roller will not delaminate during use and will also not shed lint on the painted surface. ✖

Source: www.plascon.co.za

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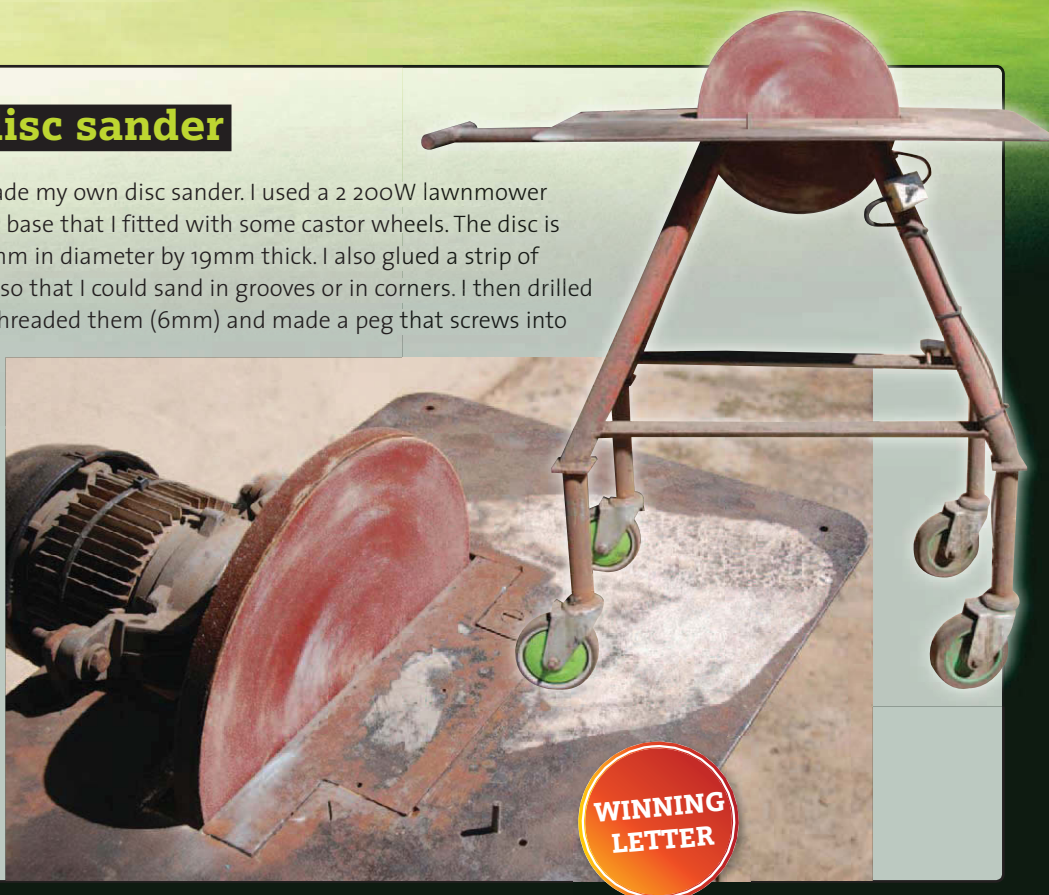
BRIGHT IDEAS

Readers share their time saving, space saving or innovative ideas

Home-made disc sander

I would like to share how I made my own disc sander. I used a 2 200W lawnmower motor and mounted this on a base that I fitted with some castor wheels. The disc is glued to a piece of pine, 300mm in diameter by 19mm thick. I also glued a strip of sandpaper on the outer edge so that I could sand in grooves or in corners. I then drilled some holes in the table and threaded them (6mm) and made a peg that screws into the table from the bottom so that I could make perfect circles. The holes are drilled on the radius of the disc you want to make. I then cut the disc near to size on the table saw, drilled a 6mm hole in the disc centre, slipped this over the peg on the table and rotated the disc to give me a perfect circle. This is very handy if you have to make a number of circles the same size.

Hans Kleynhans, via email



WINNING LETTER

Congratulations to Hans who wins a Makita HP330DWE – Cordless 10.8V Li-ion Drill Driver + MR051 Radio (supplied in a carry bag with a holster for the drill, 2 x 1.3 Ah 10.8V Li-ion batteries and a charger).



WIN!

Share your ideas!

a Maktec MT870 Rotary Hammer

Send your bright ideas to *The Home Handyman* 'Bright Ideas', PO Box 650484, Benmore 2010 or email: editorial@homehandyman.co.za. Please include your phone number and physical address during office hours.





HP330DWE - 10.8V Li-Ion Hammer Drill Driver with MR051 - Radio

Your compact tool for hard to reach places

10.8V 1.3Ah
LITHIUM-ION



Specs for HP330DWE

Capacity:	
- Steel:	10mm
- Wood:	21mm
- Masonry:	8mm
No load speed:	
- Hi:	0 - 1,500
- Lo:	0 - 400
Max. fastening torque:	
- Hard	24Nm
- Soft:	12Nm
Net weight:	1,1kg

Supplied in a carry bag
with a holster, 2 x 1,3Ah 10.8V
Li-Ion batteries and a charger.

MakitaPowerToolsSA



MakitaToolsSA



makita.co.za

For more info. and your nearest Makita dealer contact Rutherford:

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A MEMBER OF THE **Hudaco** GROUP

After purchasing a new queen-size mattress, we needed a queen-size bed base to match. We didn't want the normal bed base that came with the mattress, so I decided to build our own from metal

By Roelof Strydom
and Flip Brink

Step-by-step guide

Step 1: With the four lengths of angle iron cut to the appropriate lengths, use a cut-off saw to mitre all their ends to 45 degrees. Be careful when doing this as you have to keep track of how the angle iron pieces should go into the cut-off saw to ensure the mitred ends are correct. When the angle iron frame is welded together, the bed mattress should fit inside the angle iron. Therefore mitre all the angle iron ends on their open sides.

Step 2: Lay the four lengths of angle iron on a level surface. Line up all the mitred ends while making sure the two 1 560mm lengths go on the top and bottom and the two 1 920mm lengths on the sides.

Step 3: Only work on one corner of the frame at a time. Do not attempt to square up all four corners at once and then try and weld them. Square up one corner and only when you're satisfied that it's square, tack weld the angle iron lengths together. Move on to the second, third and fourth corners, each time squaring them up and tack welding them together. Once all the corners are tack welded together, check each corner again to make sure they're square. Metal has a tendency to pull skew from the heat

of welding. To check if the frame is square, measure the diagonals from corner to corner and see if they are the same size. Then you can properly weld the frame together on the inside and outside of the four corners.

Step 4: Measure the distance between the two 1 920mm sides; it should be 1 460mm. Cut three lengths of flat bar according to this measurement. Next, determine the centre of the two 1 920mm lengths

and weld one of the flat bar lengths in place. Get the centre positions of the two rectangles on either side of the flat bar and weld the remaining two pieces of flat bar in place as well.

Step 5: Flip the angle iron frame upside down. On one of the two 1 560mm sides, weld the 500mm pieces of square tubing in each of the corners. Again, make sure the legs are square before you weld them to the frame.



Project guide



Difficulty: Intermediate



Estimated cost: R1 500



Estimated time: One day



Materials

- 7m of 50mm x 50mm x 5mm angle iron
- 6m of 50mm x 50mm x 1.6mm square tubing
- 4.5m of 50mm x 5mm flat bar
- 8m of 12mm square bar
- Sheet of chipboard measuring 1 560mm x 1 920mm
- 400mm of 12mm threaded bar
- 8 x 12mm nylon nuts
- 8 x 12mm washers

Step 6: To construct the headboard you need to weld the two 1 600mm lengths and one 1 560mm length of square tubing to form an H-shape. The two 1 600mm lengths will form the top legs of the headboard and this is where the square bar will go in-between. On each of the 1 600mm lengths, measure 500mm upwards from the end you choose for the bottom. On these 500mm marks, weld the 1 560mm length of square tubing.

The underside of the 1 560mm square tubing should be in line with the 500mm mark to ensure the bed base is level.

Step 7: Then weld the square bar design into the space that will make up the headboard. Measure 200mm downwards, from the top ends of both the square tubing pillars. Weld the 1 560mm length of square bar to the pillars in the centre of the square tubing.



1 Use a cut-off saw to mitre the ends of the angle iron



2 Construct the frame of the bed base with the four lengths of angle iron



3 Weld the flat bars in place. They will provide support to the wood and the mattress



Tools

- Welding machine and electrodes
- Cut-off saw
- Square
- Tape measure
- Drill and drill bits
- Angle grinder
- Hammer
- Centre punch



The height of the legs is 500mm



Weld both the square tubing legs onto the underside of the base's frame



Construct an H-shape from the two 1 600mm lengths and one 1 560mm length of square tubing. The horizontal length is 500mm from the bottom



Use the 12mm square bar lengths to construct the headboard design in-between the two pillars



Drill 12mm holes in the 1 560mm square tubing of the headboard



Cutting list

- 2 x 1 560mm lengths of 50mm x 50mm x 5mm angle iron
- 2 x 1 920mm of 50mm x 50mm x 5mm angle iron
- 2 x 1 600mm lengths of 50mm x 50mm x 1.6mm square tubing
- 2 x 500mm lengths of 50mm x 50mm x 1.6mm square tubing
- 1 x 1 560mm length of 50mm x 50mm x 1.6mm square tubing
- 3 x 1 460mm lengths of 50mm x 5mm flat bar
- 1 x 1 560mm length of 12mm square bar
- 1 x 1 136mm length of 12mm square bar
- 1 x 712mm length of 12mm square bar
- 2 x 838mm lengths of 12mm square bar
- 2 x 626mm lengths of 12mm square bar
- 2 x 414mm lengths of 12mm square bar

Step 8: Measure 200mm inwards from both sides of the 1 560mm square bar as well as on the square tubing below. Just to be sure, measure the distance between the 1 560mm length of square bar and the square tubing below – it should come to 838mm. Weld the two lengths of 838mm square bar in place on the 200mm marks you determined earlier. Again weld them in the centre of the square tubing below.

Step 9: Measure 200mm downwards on both 838mm lengths to indicate where the 1 136mm length should go. After this, measure 200mm inwards from both sides of the 1 136mm length as well as the square tubing below to get the position for the two 626mm lengths of square bar. Once again, measure 200mm downwards on the two 626mm lengths to get the positions for the 712mm length. Once that's welded in place, measure 200mm from both sides on the 712mm length as well as the square tubing below to get the position for the two 414mm lengths.

Step 10: Drill 12mm holes in the 1 560mm length of square tubing. These are the holes

that will be used to fasten the headboard to the angle iron frame. Four holes will be sufficient and, to make things easier, drill the four holes in line with the two 838mm and two 626mm lengths of square bar. For accuracy, drill these holes with a drill press. This will ensure that the holes in the square tubing line up with each other.

Step 11: Prop up the headboard and frame and line them up, then transfer the 12mm



Note

Don't cut the lengths of square bar and flat bar when you cut the square tubing and angle iron to size. In theory, the flat bar and square bar should be certain lengths, but measurements will always be a little off. Rather be on the safe side and leave the flat bar and square bar and cut them when you can measure the exact distance they need to be.



9 Line up the frame and the headboard with each other and transfer the holes in the headboard onto the frame and drill them as well

holes in the headboard to the top part of the angle iron frame.

Step 12: Cut four 90mm pieces of 12mm threaded bar as this will be used to fasten the headboard and frame to each other. Once cut, grind away the bur on the ends of the threaded bar to enable the 12mm nuts to screw onto the threaded bar.

Step 13: Use a small angle grinder with a grinding disc attached and grind away all the welds.

Step 14: Wipe down the metal using some turpentine to remove any grease and dirt before applying a metal primer. Once the primer has dried, apply a topcoat in the colour of your choice.

Step 15: After the topcoat has dried, move the headboard and frame into your bedroom, where it can then be assembled. Simply line up the holes in the headboard with the holes in the angle iron frame and push the threaded bar through. Place a



10 Cut four pieces of threaded bar, each 90mm long



11 To assemble the bed simply fasten the headboard and the frame to each other by means of the threaded bar



12 To enable the wood to go in, you might have to cut a slot so that the wood can fit underneath the nut

12mm washer over each end and screw on the 12mm nuts. Tighten the nuts on both ends of each of the threaded bar pieces.

Step 16: The final step in this bed base construction is to place the chipboard sheet inside the angle iron. This will support the mattress. ✂



13 The bed base with the wood support in place



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The art of welding



The ability to weld opens up a whole world of creative options to the DIY'er. Making objects from scratch saves you money, stimulates your creative side and can even make you money. Here's how

By Roelof Strydom

Ask DIY'ers why they like doing things themselves and the answer will most likely be "because I like the feeling of accomplishment and satisfaction it gives me". Like many other handyman skills, the ability to weld can give this feeling of accomplishment. Welding can also save you money as, more often than not, you can build something for less than you would have spent buying it. You can also earn some extra money if you choose to make objects and sell them afterwards. No matter how you look at it, welding is a welcome skill from which you can benefit. So, if you want take up welding, here are some handy tips.

Shielded metal arc welding (stick welding)

Stick welding is probably the most common type of welding used by DIY'ers. This welding process involves a welding machine that provides an electric current to a flux-coated welding electrode, which forms an arc between the electrode and the metal to be joined. During the weld, the electrode's flux coating disintegrates and gives off a vapour. This serves as a shielding gas and provides a layer of slag to protect the weld. The reason it is so popular is because it's relatively easy to do and is pretty versatile. Don't get me wrong when I say it's 'easy' (because nobody will perfect the art of welding the first time around); by 'easy' I mean that all that is needed is for the machine to be plugged into a power source, the cables connected to the machine, a welding electrode clamped between the rod holder, the earth clamp connected and you're ready to weld.

• Safety

Always remember to wear the appropriate safety gear when you're welding. The most important is probably the welding helmet. Helmets have come a long way from goggles to flip front helmets to today's self-darkening helmets. If you're a first time welder, you'll save yourself a lot of trouble by buying a decent self-darkening helmet. You might think it's unnecessary because you're only starting out and they are a lot more expensive than the flip front helmets (decent self-darkening helmets

retail for about R800 while you can get a flip front unit for less than R100), but a self-darkening helmet frees up one of your hands because there is no dark lens that needs to be flipped down as with flip front helmets. First-time welders will find it difficult to flip the dark lens down each time they are about to strike an arc. A self-darkening helmet simplifies this task as you just put the helmet on and begin welding.

Other important safety gear includes leather gloves, which will protect your hands from molten welding spatter, a leather apron to protect your clothes and body as well as steel point shoes to protect your feet. A normal pair of takkies will provide no protection when welding spatter falls onto them as the spatter will easily burn through and land on your feet.

• The welding machine

The best piece of advice for a novice welder is to go and buy an inverter welder. An inverter welder converts 50Hz alternating current (AC) input power into direct current (DC) output power. Unlike conventional oil cooled and air cooled welding machines, where the voltage changes 50 times a second resulting in an unsteady current because it keeps going through zero, inverter welders offer a steady current thus allowing the welder to strike and maintain an arc easier. Apart from this, inverter welders are much

lighter and smaller than their predecessors, making them highly portable. Take the Afrox Transarc MMA 160 inverter for example; it's smaller than a computer box allowing you to weld almost anywhere. You simply have to pick it up and take it to where you need to weld.

• Surface preparation

Before starting to weld, ensure that the surface of the metal you want to weld is free of oil, paint and surface rust. There needs to be a clear path between the electrode and the metal for it to be able to conduct electricity. Sand away any rust and paint with sandpaper and clean away oil with detergent.



Always remember to wear the appropriate safety gear when you're welding



▲ A self-darkening helmet takes the hassle out of having to darken the helmet manually and leather gloves will protect your hands



• Welding current

When the welding current is too low, it makes striking and maintaining an arc difficult, which then results in electrode stick. If the current is too high, it leads to burn through of the workpiece and excessive spatter. It's recommended you do a few test welds on some offcut metal the same thickness that you intend to use for your project. The test welds will help you determine where to set the current to get the best possible welding results. Remember, practice makes perfect and with welding it may take a few goes, but the more you weld, the better you'll get.

• The first weld

When welding pieces of metal together, always tack weld them first. A tack weld is a small weak weld used to keep the metal pieces together, but still allows you to make adjustments before you

do the final weld. An example where a tack weld can be used is when welding a framework together and you need the four corners to be completely square. Line up the metal as best as possible and then tack weld it together. Do this with all four corners and then you can go back and make sure they're square and if not, you can make the necessary adjustments.

• Removing flux

After you've laid down a bead of welding, you need to remove the flux coating that gets left behind. This is when you would use a chipping hammer. Novices think you need to hit the weld as hard as possible to get rid of the flux coating, but this is actually incorrect. Instead of hammering, rather rake the chipping hammer over the flux to remove it. Hammering the flux away leaves permanent tiny divots in the weld. ✖



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Pretty up your wall

Vibracrete is widely used in South Africa as fencing. Many people leave it in its natural state while some paint it. Why not do something completely different and turn it into a feature in your garden

By Karin Wainwright

Step-by-step guide

Step 1: Mix some Alcolin P300 Tile Adhesive with a little bit of Alcolin Black Grout to change the colour. Then mix with Alcolin Permo Plaster and dilute with water until you have a paintable runny slurry. Paint the Vibracrete with two layers of this mixture. Test first to see if the colour dries to the shade you want. Allow to dry very well.

Step 2: Take a saucer or round tub and draw a large circle on white paper. Draw a cross or star over the circle – whichever you prefer. Draw another smaller circle inside for guidance, but you will also be using this later for your smaller circle mosaics.

Step 3: Trim the picture, but leave at least 50mm around the edges. Lay the paper down and cover with plastic. Layer a little piece of mesh of the same size over that. Secure the layers by stapling them on the two sides. You will use the same image over and over, so don't fasten it too tight.



Tip

It is much easier to staple this together as opposed to using tape. Just make sure that your staples are outside the area where you are tiling.



Materials

- Alcolin P300 Tile Adhesive
- Alcolin Ultra Wood Glue
- Alcolin Permo Plaster
- Alcolin Permo Bond
- Alcolin Grout in Black
- Fibreglass mesh offcuts
- Plastic sheeting that won't stick to adhesive
- Some random cut mirror pieces
- Selection of vitreous glass mosaic tiles
- Glue remover (depending on tile backing when you buy)

Step 4: We are going to start with the cross in a red 10mm x 10mm Vitreous tile. Apply a little bit of Alcolin Ultra Wood Glue to the underside of the tile or to the mesh area, whichever you prefer, and place the tile, pressing down lightly. If the glue comes up between the tiles, you need to use less. Make sure that the cross goes one tile over



Tools

- Rubber grout spreader
- Mask and gloves
- One wide paintbrush, cloths and throwaway tubs
- Wheeled glass cutter
- Bucket to mix cement in

the outside circle line because this will make the outside circle neater. Take the blue tile and cut it in half at a slight angle. This angle will help with creating a curve. Stick them down right around, followed by another row of green.

Step 5: Complete the circles by filling in the remaining quarter shapes with random cut mirror pieces. Let the glue set for a little bit and remove the paper drawing and follow the process again until you have made four circles in varying combinations of the three colours.



Tip

You will find it much easier if you cut all the halves and random shapes beforehand, as opposed to cutting them as you need them.

Step 6: I also made three large and four small circles with only 10mm x 10mm tile lines around the edge and mirror pieces inside. Let them dry overnight. Flip over and peel back the plastic.

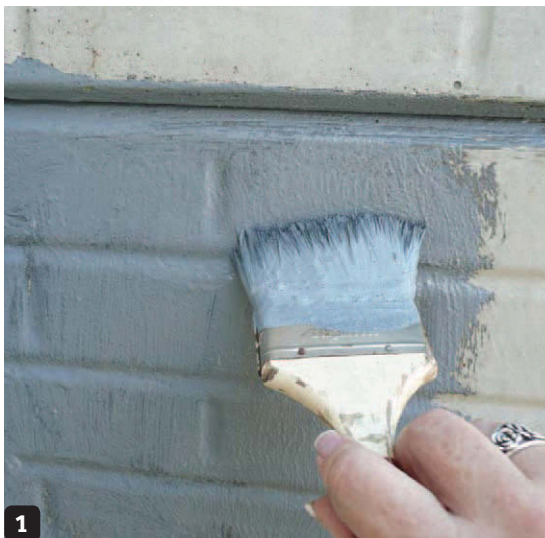


Tip

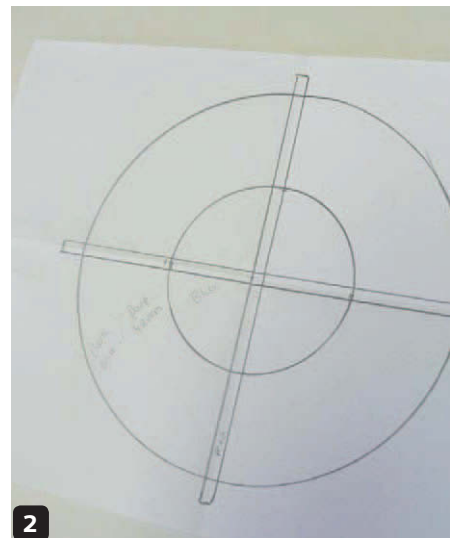
Do not be tempted to flip the mosaic before it has dried because it could end in disaster.

Step 7: Trim the edges as close to the tiles as possible. Allow to dry further until the glue no longer shows white.

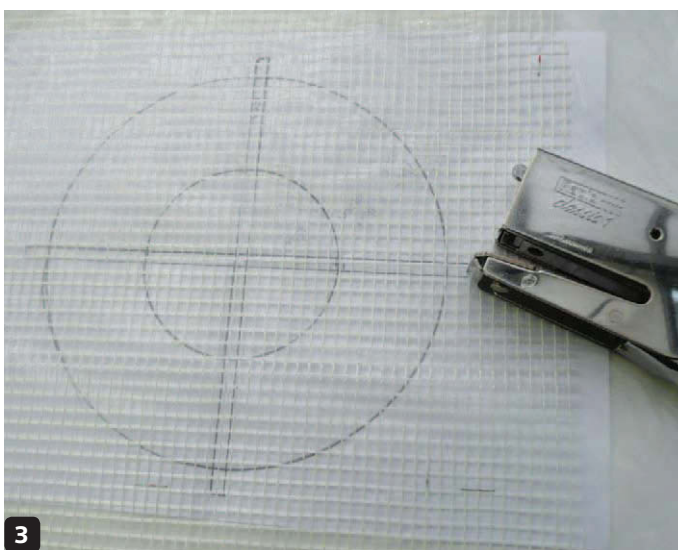
Step 8: Set up all the equipment you need at your work area. Take the circles and plan where you are going to stick each one. This is important because if you do not plan you



1



2



3

Captions:

- 1: Key the vibracrete wall
- 2: Draw the pattern on a piece of paper
- 3: Secure the layers of paper, plastic and mesh to each other with staples

could end up with odd spacing or repeating colours next to each other. Hold a circle against the wall and mark the outline with a pencil.

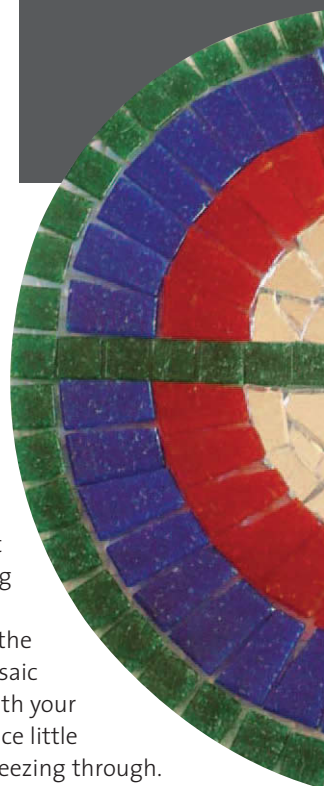
Step 9: Using a small tub and scraper or stick, mix some of the Alcolin P300 tinted mixture with water and Alcolin Permo Bond as per manufacturer's specifications indicated on packaging. Wear your mask. Allow to stand for a few minutes, then spread a very thin layer of adhesive on the circle that you have drawn on the wall.

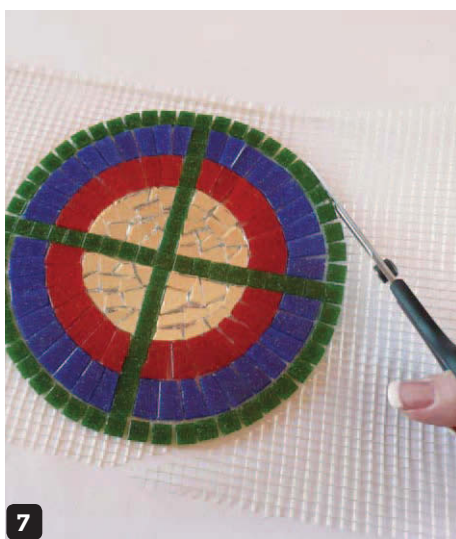
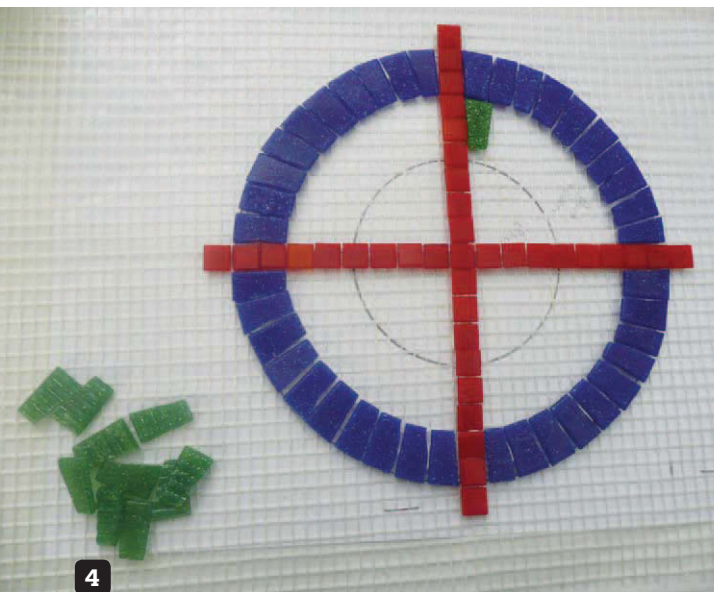
Step 10: Now, using a small spatula, spread adhesive onto the back of one of the mosaic circles. Make sure you have adhesive on the edges. Take note that if there is a thick layer of adhesive, the mosaic will float

and it will be very messy, so just use a small amount.

Step 11: Pick up the disc at the top and place it mesh side down onto the adhesive on the wall. Make sure it is in the right place before pressing down on it.

Step 12: Starting in the inside, press the mosaic to the wall firmly with your fingers. You will notice little bits of adhesive squeezing through.





Work your way out until you are at the edges and the adhesive starts squeezing out the sides. If a lot squeezes out, you have way too much adhesive, so use less on the next one.

Step 13: You can grout almost immediately on these little pieces. Use the same mixture as you used to attach the mosaic as a grout. Using your fingers, scoop some out and smear onto the mosaic, filling all the little gaps.

Step 14: Make sure you run your finger along the outside edge in order to smooth it out and close all the little holes. If you don't do this, it looks untidy and the mosaic is not properly enclosed allowing water to seep in underneath, which can cause a big

problem, especially in frost regions.

Step 15: The adhesive sets quickly and the bond makes it stronger, so clean it straight away with a small sponge and a tub of warm water with dish washing liquid. Be gentle and wipe in small, circular motions. Leave for a little while and wipe again with a clean, damp sponge.



Tip

You may need to paint a little bit of the first mixture around the outside of your discs as the adhesive may dry a bit lighter.

4: Use wood glue to stick the tiles to the mesh

5: Fill the shapes with pieces of mirror

6: Peel back the plastic

7: Trim the edges as close to the tiles as possible

8: Plan where you are going to place the circles on the wall

Step 16: Wipe the mosaics down with a mixture of one part water to one part vinegar the next day. ✕

Project notes

Be careful not to bend or flex. You can attach your mosaic to a wall of your choice, either by bolting it on, in which case you should remove some of the tiles just prior to grouting, or you may want to stick the board onto a wall with cement adhesive. Alternatively, you may want to attach the mosaic mesh straight onto a wall. To do this, mark the area on your wall. If the wall is painted, you need to chip the surface first with a chipping hammer. After that, the procedure is pretty much the same from painting the keying agent on. However, if the mosaic is large and heavy, it will slide, so you can secure it by removing some tiles and driving nails through the gaps into your wall. Once dry and properly stuck, carefully remove the nails, clean the area and attach pieces as described in step 12.



Contacts

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Materials sponsored by Alcolin. All materials and tools available from Mosaic Workshop Store in Killarney Gardens, Cape Town and online at www.mosaicworkshop.co.za/catalog.

- 9: Spread adhesive on the space where you will be sticking the mosaic circle
- 10: Spread adhesive on the back of the mosaic circle as well
- 11: Place the disc mesh side down onto the adhesive on the wall
- 12: Press the mosaic firmly to the wall
- 13: Grout the mosaic
- 14: Smooth out the outer edges of the mosaic and fill all the gaps



Clay brick facts

Building with clay bricks is probably one of the oldest building methods in the world, yet still practical and beautifully modern. Here are the answers to some common questions regarding clay bricks

Q: I have just finished building and my clay brickwork is covered with a white deposit. What is it and how can I get rid of it?

Your brickwork is showing signs of efflorescence. This is a deposit of crystallised salts that may appear on the brickwork as it dries out. There is no cause for alarm. The deposit will probably wash off in the first shower of rain. If not, it can be removed with a firm bristle brush. There is absolutely no need to use chemicals, acids or any other proprietary treatment to solve this problem.

Q: I am going to use clay face bricks for the first time. I've seen walls on face brick buildings that look patchy because the bricks are slightly different colours. How can I avoid this?

Clay face bricks are a natural product so slight colour variations are to be expected. It is, however, not desirable to have a few dark bricks on an otherwise light shaded wall. This gives the patchy effect that you mention. The solution is simple. Always have at least two packs of bricks on site and draw from each pack as you work. This is known as on site blending and will ensure that you achieve an overall evenness of shade and tone. Never build from one pack of bricks at a time.

Q: I built my house with clay face bricks and the walls have started to leak. What is wrong with the bricks?

It is extremely rare to find brick walls that leak due to a fault in the brick. Damp is usually the result of poor construction techniques, inadequate window and sill detailing, lack of proper damp proof coursing and /or cracked walls. Buildings must be properly constructed with appropriate damp coursing, cavity walls where appropriate and suitable roof overhangs in order to avoid water ingress.

Q: How strong will my clay brick building be?

Generally speaking, loads imposed on brickwork are very small in comparison with the load that the brickwork carries. Brickwork is strong under compression, so the greater the load imposed on the brickwork, the more stable it becomes. When building boundary walls and other free-standing brick structures, make sure that you provide appropriate foundations and reinforcing.

Q: How can I clean brickwork?

During construction, protect the brickwork from cement smear, paint and other substances. Once finished, buildings constructed from clay bricks, clay face bricks and clay roofing tiles require little or no maintenance.

Q: I would like to use clay bricks (or specifically, clay face bricks), but I think they may be too expensive?

Because brickwork is the largest visible component of a building, the perception exists that the major cost of a building must be the

brickwork. However, this is not the case. They are, in fact, extremely cost-effective. The cost of clay plaster bricks and clay face bricks for an average house is between 6 and 8 percent of the total building costs. The cost of clay face bricks and plaster bricks for a non-residential building (factory or office block) is approximately 2-3 percent of the total building costs. In the case of a clay face brick building, once the plaster and paint component is added to the building process and the long-term maintenance cost of repainting and replastering is added to the life of the building, clay face brick is a clear cost winner.

Q: How many bricks, how much cement and how much sand will I need for my project?

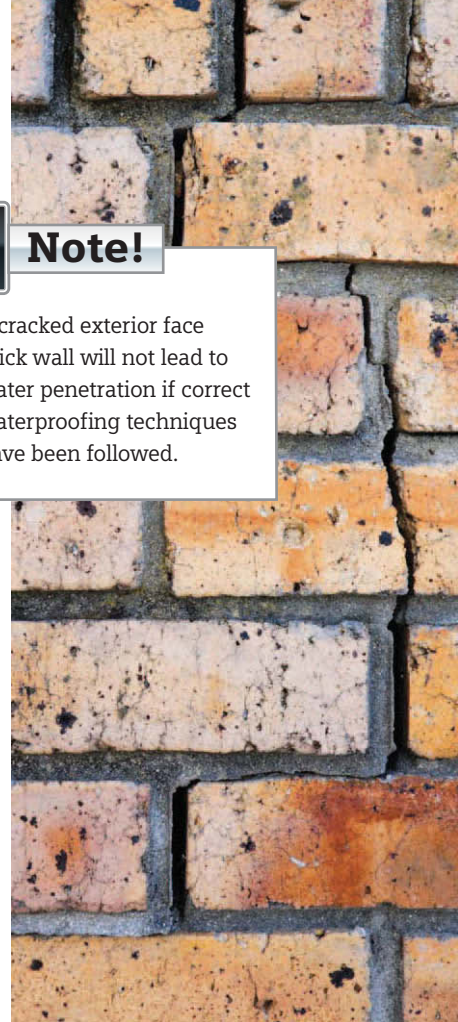
To lay 1 000 bricks in a Class II mortar (1:6 mix) will require 0.5m³ sand and 2.5 x 50kg bags of cement.

*Source: Information supplied by Corobrik.
Visit www.corobrik.co.za for more information.*



Note!

A cracked exterior face brick wall will not lead to water penetration if correct waterproofing techniques have been followed.



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Make your mark

Last month we published an article on preparing wood, and now we discuss measuring and marking – the second step to creating a successful project



When the wood has been prepared, a range of tools and techniques are used to transfer the primary measurements, followed by the secondary lines, such as angles, circles and flowing forms, to the wood in readiness for making the first cuts. These need to be done with patience to be correct and easily visible.

Crosscutting

A crosscut is a cut that runs across the grain at right angles. When using a try square to mark it, put the knife on the measured mark. Then set the square hard up against the true face edge of the workpiece and slide it up to the knife. Then draw the knife towards you to mark in the line of cut.

When using a compound mitre saw, set the angle scale, adjust the length stop, butt the workpiece hard up against the fence,

check that the blade is to the waste side of the line and make the cut. If you are not confident with the steadiness of the workpiece, clamp it in place.

It is essential to use the length stop when you are preparing components of an identical length – it is quicker than marking each piece individually and far more accurate.

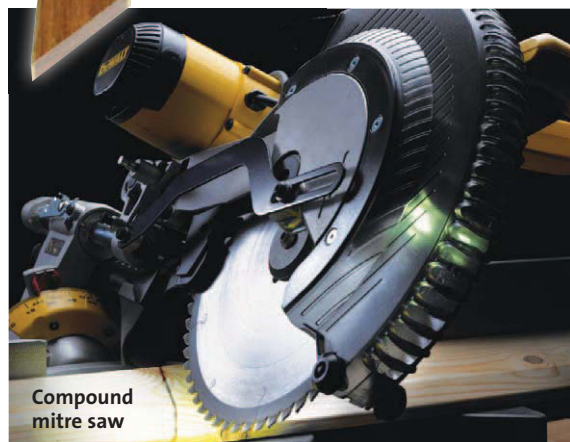
Angled cuts

Make angled cuts with a sliding bevel (also called a mitre square), which is used in much the same way as a try square. Loosen the wing nut, set the bevel angle

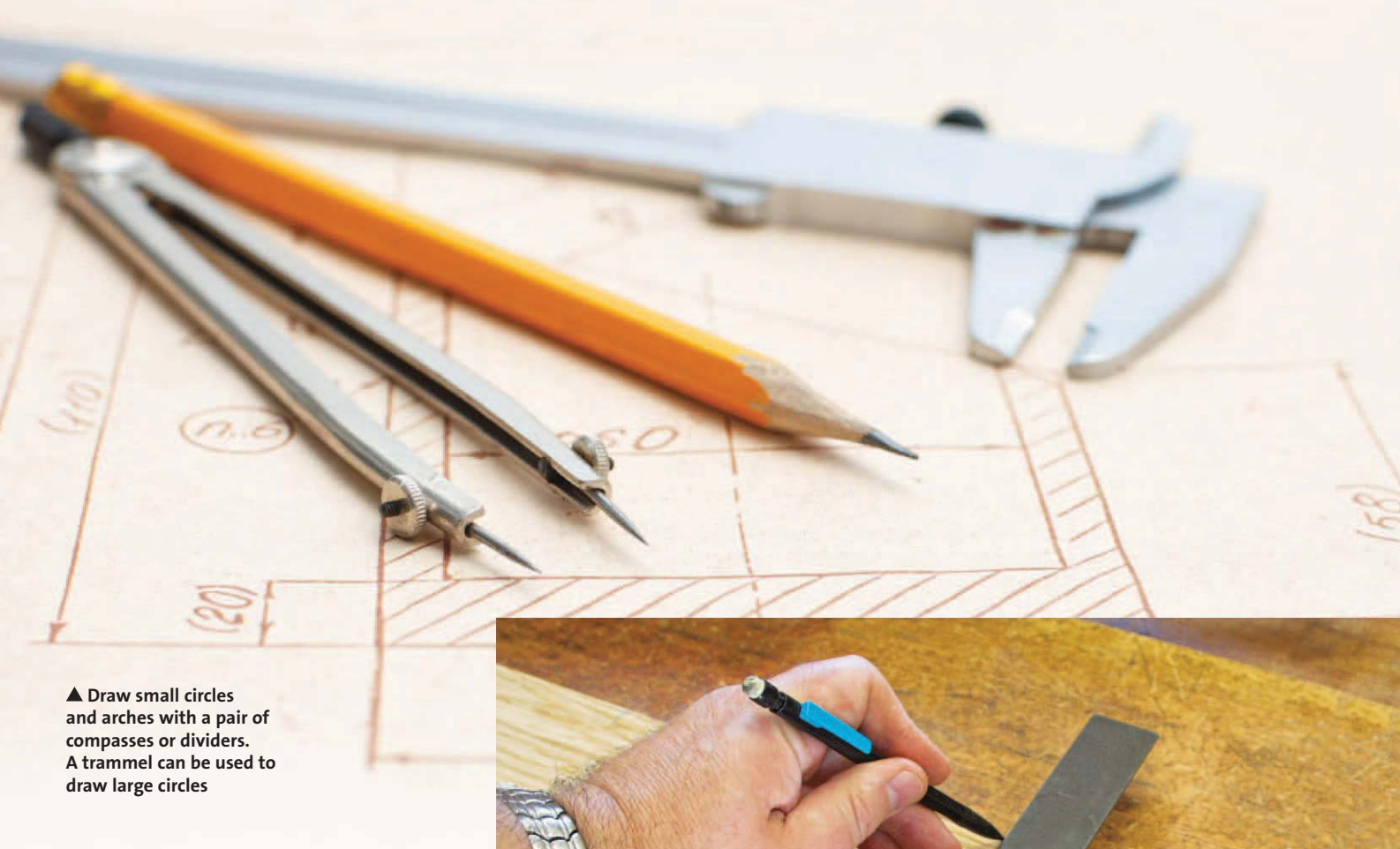
against a protractor, tighten up the nut and then transfer the angle to the workpiece. Alternatively use a compound mitre saw. Set the saw blade to the basic mitre angle and then tilt it and set it against



▲ Mitre square



Compound mitre saw



▲ Draw small circles and arcs with a pair of compasses or dividers. A trammel can be used to draw large circles

the calibrated pivot assembly. Butt the workpiece hard up against the fence and clamp in place before you make the cut. A compound mitre saw is easily set to the correct angle with a scale, which saves time.

A compound saw cuts a mitre angle and a tilt angle. Both of these can be set using the angle scales on the machine itself.

Circles and arcs

Draw a small circle and arc with a pair of compasses or dividers. Set the two legs to the desired radius, and spike one leg on the centre point. Swing the other leg around to scribe the circle.

To draw a large circle, use a trammel. To make one, use an offcut that is longer than the radius required. Hammer a pin through one end to make a pivot and drill a hole in the other end to take a pencil. The distance between the pin and pencil point is the radius.

Set the pencil and spike to the radius of the circle, place the spike on the centre point and then draw the pencil to scribe a circle. A very large circle or arc can be drawn using a beam compass or trammel headset, which can be clamped to any length of metal tube or wooden dowelling.



To check the accuracy of a try square, mark a line on a flat surface and then flip the square over and see if you can align the blade with the drawn line



Tip!

Mark out dimensions and joints using light pencil marks and an accurate measuring rule. Always double check your markings. As the saying goes, "measure twice, cut once".

Organic shapes

Organic shapes are shapes that are free-flowing with curves. These shapes can be drawn on wood free hand, or you can use a template. Sketch the shape on gridded paper and then cut it out to use it as a template. If you want to make many repeat forms, make a more robust template from material such as plywood or hardboard.

Squares

To check the squareness of a small internal corner, such as in a drawer or box, the simplest method is to use a try square.

To check a larger frame, check the corners with a long-armed try square and then use a tape measure to make sure that the two diagonal measurements are equal.

To check the accuracy of a try square, mark a line on a flat surface and then flip the square over and see if you can align the blade with the drawn line. If you cannot, you will need to get a new square. ✖

Routing around corners

Routing has always been a big part in finishing woodwork. Denis Lock tells us why and explains how to rout corners

Bumping into sharp corners hurts. Rounded corners, at worst, result in bruises if you don't watch where you are going. The items in photo 1 on the adjacent page are examples of furniture I have built where the corners are rounded.

There are a number of ways that corners such as these can be rounded. After marking with a template and cutting away most of the waste (with a tenon saw or jigsaw) you can move over to your disc sander or belt sander and carefully sand to the line (photo 2). The problem with a disc sander is that the sanding marks are at right angles to the grain.

A belt sander doesn't have this problem. It has, however, a more serious problem. As you sand around the curve and reach the straight edge, the belt can grab the piece of wood being sanded. This happened to me; the piece of wood was ripped from my hands and flung in the direction of the belt rotation at the speed of the belt. The result: A tear in my shirt, a gash in my abdomen and a ruined piece of wood. I no longer round corners on a belt sander – I rout them with a pattern and a flush-trim bit.

I have two patterns (photo 3) which provide rounding radii from 10mm to 50mm (in discrete steps). These patterns, made from MDF, are 300mm square. Let me show you the steps in rounding the corners, at a radius of 25mm, of the top of a stool.

The appropriate pattern is screwed

to my workbench as shown in photo 4. The top of the stool is clamped to the pattern/bench as shown in photo 5. Most of the waste on the top's corner has been cut away on a bandsaw. I don't believe in turning everything into router dust – I hog away most of the waste with a saw of some sort. At first I tried putting two lugs on the pattern to facilitate the line up of the workpiece with the pattern. It turned out that this is not necessary – lightly clamp the workpiece to the pattern and use your finger tips to check the line up.

Tap the workpiece with a small hammer and nip up the clamps when you are happy. Two points are worth making – your fingertips are the most accurate measuring device in your workshop, and wood is an elastic material and light taps with a hammer do no damage. Photo 6 is a close-up view of the setup just described.

Put a flush trim (a straight bit with a lower bearing) in your router and set the depth so that the bearing runs against the template as shown in photo 7. I am using a Pro-Tech bit # KP304, which is a 12,7mm diameter bit with a 25,4mm cutting edge. A schematic is shown in figure 1. Position the router as shown in photo 7 – the bit is just clear of the workpiece. Use your left hand to provide downward pressure onto the workpiece and stabilise the router. Use your right hand to provide sufficient sideways pressure to keep the bearing

rolling against the pattern. In addition to these actions, both hands provide the guidance to run the bearing around the pattern. Do not try and drive the router around the corner as you would steer a motor car. Keep the front-to-back axis of the router pointing in the same direction. Follow the pattern by moving the router simultaneously away from you and from left to right (counterclockwise). This is actually a lot harder to describe than to perform. Start the cut just before the start of the corner arc and continue just beyond it. Move the bearing away from the pattern and switch off the router. Do not lift the

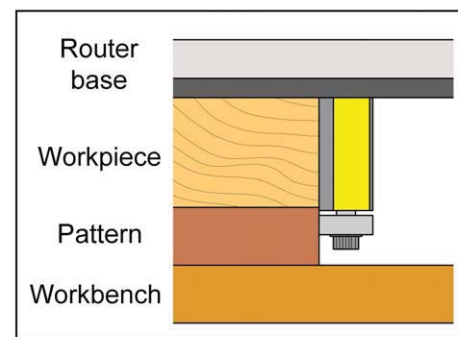


Figure 1: Flush trim router bit

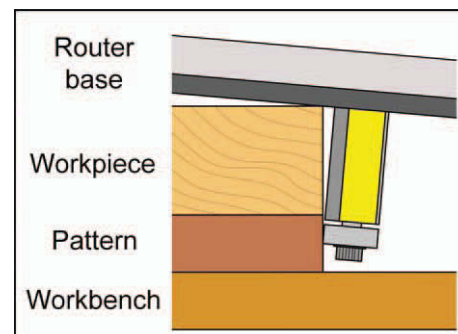


Figure 2: Effect of tilting router base



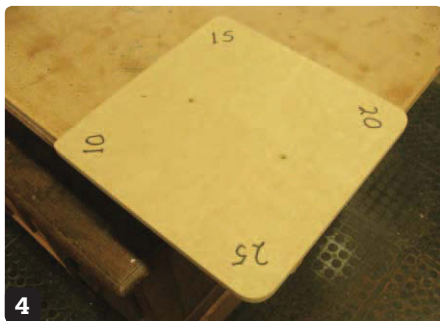
1 These corners won't break your skin



2 Rounding ends of a folding table legs



3 Corner-rounding patterns



4 Pattern attached to bench top



5 Workpiece clamped to pattern/bench



6 Line up accurately

router until the bit has stopped spinning. If the bearing moves away from the pattern, do not try to make an in-flight correction – stop cutting and then repeat the cut from the beginning.

As you can see from photo 7, less than half of the router base is supported by the workpiece. This is why I stressed the use of the left hand to provide downward pressure. The reason I recommend the use of a bottom-bearing bit is that if the right hand pushes downward and tilts the router base, the cutting edge of the bit moves away from the workpiece. This is shown (exaggerated) in figure 2. If this happens, I also advise that you do not try to make an in-flight correction.

Before releasing the clamps, visually check that you have faithfully reproduced the pattern (photo 8). When repositioning to cut the other three corners, make sure that the cut is always started on a long-grain edge. In other words, always maintain the orientation shown in photo 5.

Photo 9 shows two of the completed corners. Only a highly skilled operator could achieve that accuracy and consistency on a disc or belt sander. You can achieve it with your router and a little bit of practice provided you have an accurate pattern.

Make an accurate pattern

Start with an accurate full-size drawing on a piece of paper. Do it with a compass and



7 Flush trim router bit

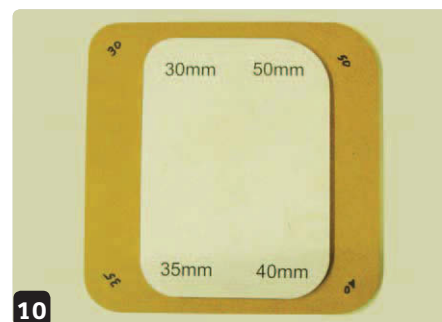


8 Check the cut

set square if that is all you have. I use a CAD package and prepare the drawing on my computer and print it out on an A4 sheet. Glue the sheet to a piece of 6mm MDF or plywood. The trick here is to apply the glue (normal cold glue) to the MDF, not the paper. Apply a thin layer of glue to the MDF and smooth the paper onto the MDF. When dry, cut out the pattern with a scrollsaw or jigsaw and then sand very carefully to the pencil or printed line on a disc sander. Finish with a sanding block taking special care to blend the arc into the straight sides. Photo 10 shows my efforts. The 30/35/40/50 pattern shown was printed onto an A4 sheet of paper and then glued, cut and sanded as just described. The A4 size master pattern was then used to rout the 300mm square production pattern shown underneath it. With a little bit of patience and a sanding block, you can make very accurate patterns.



9 Completed corners



10 Start with a printed pattern

A polished performance

French polishing is a finishing art that originated in the 18th century. Viv Martin provides interesting facts about its history as well as a guide on how to French polish wooden furniture

French polishing is the name given to the process of coating wood with a solution of shellac dissolved in alcohol, using a 'rubber' made from a rag and cotton wool instead of a brush. The alcohol evaporates, leaving shellac deposited upon the wood. When applied correctly, it produces possibly the finest looking finish for furniture.

Shellac was first introduced into Europe in about the 16th century, but the term 'French polish' was not used until about 1820, when the process was developed by a French cabinetmaker.

Basic materials

Shellac is an encrustation surrounding an insect known as *Laccifer lacca*, which is a parasite living in certain trees in India and other Eastern countries. The insect is 2mm long and has a life cycle of six months.



The shellac is gathered by cutting the infected twigs from the trees, scraping it off, washing and, in the pre-mechanised days, it was extracted through canvas tubes heated over a fire. The initial shellac comes through clean and drops of about 12cm form on a cold stone, which helps them to set. This is known



as button lac from which button polish is made. The next stage of extraction is in the form of a thin sheet, which is crushed into flakes when it's cold. These flakes are then used to make French polish.



▲ Shellac



Modern processing plants now exist for producing shellac similar to the hand-made varieties. In India today, a full 'hand' industry exists of 'pulling' the soft sheets into even thickness, allowing them to dry and breaking into flakes. Blonde or bleached shellac has some of the colour removed with chlorine and is used on the lighter woods.

The type of shellac used can vary considerably in colour from pale orange to dark brown. French polish is suitable for use on all dark woods and light woods, when a light to medium brown tone is required.

Button polish on the other hand is used to obtain a more orange or golden tone, whilst light coloured or bleached woods should be treated with transparent polish, which is almost clear.

Preparing the surface

Preparation of the surface for French polishing is extremely important, as any slight imperfections that might not be visible under varnish or oil finishes will be apparent under French polish. It is therefore essential that the surface is clean and fine sanded.

Furniture that is being renovated should be cleaned to make sure it is free of wax and grease. This can be done with white spirits and Liberon 0000 steel wool. If the surface is in a very bad condition, it is best to remove it completely with a paint remover.

If the wood is open grained and you require a smooth mirror-like surface, fill the grain with spirit-based grain filler or sanding sealer and then thin sand these areas with 1 400-grit sandpaper. The alternative, once first sealed with one coat of shellac, is to run over the surface sprinkling pumice or rottenstone (min 6/0 grade) with a slightly spirit damped rag in circular motions to fill the grain. Bear in mind that if the surface is not properly prepared, the coating of shellac will greatly magnify the blemishes. An option, which needs to be tested on a piece of scrap wood, is to add spirit-based dye to the polish to derive the colour you require.

Applying the polish

There has always been a mystique about the art of French polishing, but it is a process that can be carried out by any competent amateur with a little practice. The actual process of polishing consists of bodying in, building up and spiriting out. The polish in all three processes is applied with a 'rubber' made by wrapping a piece of unmedicated cotton wool in a piece of soft cotton or a linen rag. An old handkerchief or a piece of cotton sheet is also ideal.

The size of the rubber depends on the size of your hand and the size of the work



Tips

- Before attempting to French polish an article of furniture, always practise on a spare piece of timber. This is necessary as it is not until you actually try out the method that the process becomes clear.
- Always French polish in a warm, dry, dust-free room. If you polish in damp, humid conditions, the surface will get a milky appearance called blushing.
- You can obtain a satin or matt finish after French polishing by rubbing the surface with 0000 steel wool and wax polish and then rubbing it with a soft shoe brush.

being polished. For example, a large rubber will be suitable for use on a tabletop, while a small rubber would be more suited to a coffee table.

To make the rubber, take a piece of cotton wool or cotton waste about the size of a tennis ball and mould it into a triangular shape. Lay the cotton wool/ waste inside the cloth and fold the cloth into a pear shape. It is very important to ensure there are no creases or stitching on the base of the pad as this will create lines. If the wood has not been filled correctly and the short fibres of the wood stand proud, the polish should be allowed to harden and then rubbed with 1 200-grit wet and dry sandpaper that has a mild cutting action.

Unwrap the pad to pour polish into the cotton wool – never pour polish onto the outside of the rubber or dip it in the polish. Squeeze the pad out; the rag will act as a strainer, ensuring that no scratches occur on the surface due to any foreign body having inadvertently entered the polish.

Now press the rubber onto a scrap piece of wood or cardboard to squeeze out the excess polish. If you use a rubber that is too wet, ridges of polish will be left on the work, which can only be removed by rubbing them down with 1 400-grit paper when the surface is dry.

You should apply the first coat of polish by rubbing the pad up and down over the surface quickly, without exerting too much pressure. As the polish in the rubber



Further applications of polish can be made by using the rubber in a circular or figure of eight motion, passing quickly and lightly over the surface. It is important that the rubber is slid onto the surface from the side with a gliding action and lifted off in the same way. Never apply the rubber in the middle or lift it from the middle as it will leave a mark. For this reason, you also shouldn't leave the rubber on the work as the alcohol will immediately start to re-dissolve the polish that you've already applied.

After the first few applications of polish, the rubber will not slide so easily over the surface due to the dissolving action of the



is used up, press the sides of the rubber with your thumb and fingers to force more polish out. As the polish dries it is possible, when coating large areas, to make several applications to the rubber by going from one end of the work to the other.

Small items on the other hand should be left for a few minutes so that the polish can dry before you start the next application. Always avoid passing the rubber over polish that is not dry as it will remove any polish that has already been applied. If the wood has not been filled and the short fibres of the wood stand proud, the polish should be allowed to harden and then rubbed with 1 400-grit wet /dry sandpaper that has a mild cutting action.

polish on the hardened shellac. To solve this problem, dab a small drop of linseed oil onto your finger and then apply it to the base of the rubber. Remember that you will obtain a smeary effect if you apply too much linseed oil.

Leave the work to harden for several hours after every four to five applications of

Spiriting out

The shellac that has been thinned out (1lb cut) can be easily determined from your marking on the jar, just pour in methylated spirits to dilute your 2lb cut.

Dilution

Explaining cut

2lb cut = 4 part spirit : 1 part flake

1lb cut = 8 part spirit : 1 part flake

A quick, effective way of achieving a 2lb cut, which is the most optimum dilution to build up progressive coats, is to use an airtight jar marked evenly with four equal spacings. Pour flakes to the first mark, methylated spirits to the fourth and shake and let it stand until it's dissolved.

A 4:1 dilution is optimum.

the rubber. In-between applications, store the rubber in a screw top jar and add a little methylated spirits to keep it soft and moist.

Once you have applied sufficient layers of shellac to the surface, you can begin the final operation of spiriting out, which will give the surface its high gloss finish. Simply charge the rubber with French polish that has been thinned with methylated spirits. Squeeze the excess polish out so that it just leaves a damp impression on a piece of paper. Then move the rubber over the surface using circular movements, but finishing off in straight, even strokes sweeping backwards and forwards with the grain – sweep on and off the ends. Leave the work to dry.

Now carry out the final process using a rubber charged with a small amount of methylated spirits (almost dry) and rubbing very hard with the grain – the burnishing effect will soon become apparent.

The professionals will tell you that the burnishing operation is the most critical, with common practices of acid wash and Vienna chalk, pumice or rottenstone being dusted from a pounce bag. However, the commercially obtainable burnishing creams do the job just as well. Just apply the cream to a soft cloth and burnish the dried surface in the grain direction. ✕

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The Woodworker's Corner has been turned into a bragging space

Turning heads

A few weeks ago, we ran into John Speedy at Hardware Centre, who was busy giving a class on woodturning. His student, Jim Burnett from Botswana, explained that he had always wanted to learn how to do woodturning. So, when Jim had a three-week break from his offshore job, he came down to Hardware Centre to buy a Nova DVR XP lathe and do a two-day woodturning course with John Speedy. This was the first time that Jim had done woodturning and when we saw the quality of his turned work, we were astonished and just had to share it. Everything shown here is what Jim turned on the second day of the course.

► One of Jim's first turned objects was this goblet



▲ Jim's wife was very happy because he turned a jewellery box for her

Please send us pictures of your projects. Write a caption with your name, inspiration, type of wood, etc. and send it to editorial@homehandyman.co.za.



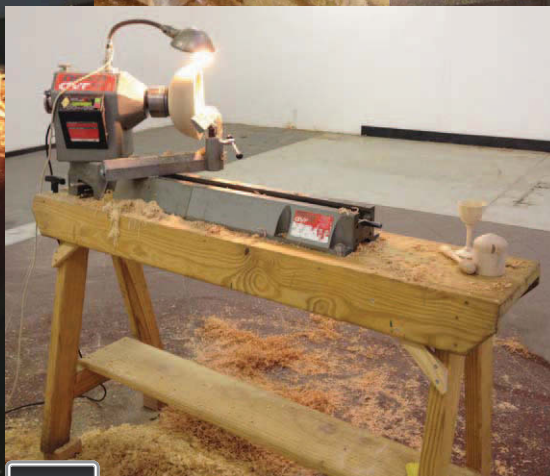
▲ He also turned a honey dipper



▲ Jim at work turning a bowl



▲ A closer look at Jim turning his first bowl



◀ The lathe on which Jim trained. He also bought one like this to take back to Botswana



Woodworking associations

Woodworking associations' details are available on our website at www.homehandyman.co.za.

BOOK SHELF

Viv Martin from Hardware Centre reviews the latest in woodworking literature.

Action Whirligigs

Author: Anders S Lunde

Publishers: Dover Publications

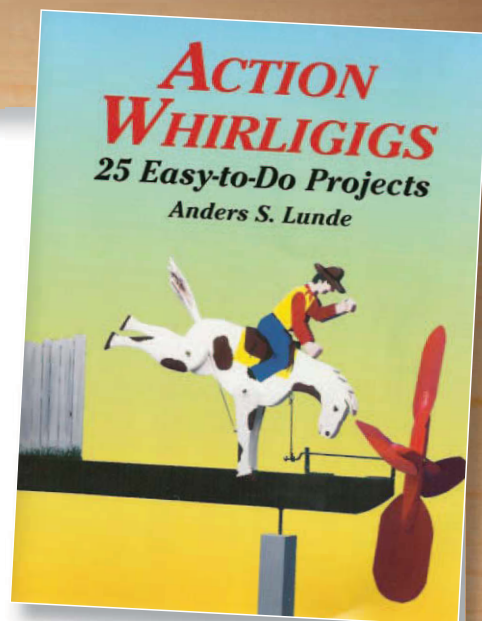
I was recently going through some old stock at the shop and came across some propeller centres and cranks that had been brought in some 10 years ago for a customer. The *Action Whirligigs* book immediately came to mind, and I thought I would review it for this month's book review.

Whirligigs – those charming little wind-driven toys – are excellent introductory woodworking projects because they are easy to make, inexpensive and, most of all, great fun!

Hobbyists at all levels of ability will love creating the 25 delightful objects described in this book, from the simple baking a pie whirligig to the more challenging woman at a computer. Others include some old-fashioned figures of a man fishing, saluting the flag, chicken feeding and an oil well pump, etc. Among the non-mechanical whirligigs are weather vanes in the form of a Dutch tulips windmill, a sailboat and a water skier.

Easy-to-follow instructions and measured drawings explain everything from selecting and using the proper tools and creating the driving mechanism to finishing and displaying the completed project.

This 126-page soft cover book promises lots of fun.



For more information, contact Hardware Centre on 011-791-0844 (Randburg) or 021-421-7358 (Cape Town)

Under new management

The East Rand Woodworkers' Association has elected its 2013 committee:

Chairman: Andre Oosthuizen

Secretary: Dennis White

Treasurer: Errol Dollenberg

Members: Gabby Hill, Kobus Joubert, Denis Lock and Thys Nel

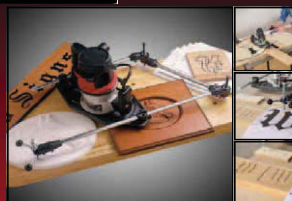


From left to right: Denis Lock, Errol Dollenberg, Gabby Hill, Thys Nel, Andre Oosthuizen, Kobus Joubert and Dennis White

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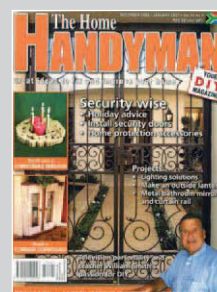
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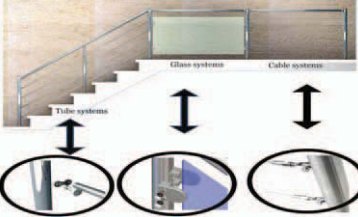
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Wild mushroom saga

Reuben the Screwman finds out that there is not much room for mushrooms in his life

As an amateur cook, I love experimenting with different ingredients; such was the case with wild mushrooms. Despite them being outrageously expensive, and not easy to hydrate or balance as a flavour in a dish. Having said that, I still use a copious amount of the shrivelled little fungi that smell like a rugby locker room. (Not that I have any idea what that would smell like, I can only imagine.)

On with the gripping episode of the 'Wild Mushroom Saga'. In my wisdom, I decided that I shall no longer be a victim of this retail rip-off, and would import the mushrooms myself. I later found out that there is a huge difference between importing bolts and nuts and importing mushrooms. The saying goes: 'One learns from one's mistakes'. If that is true, I would be a genius by now.

It was painfully humiliating and a great delight to my family, seeing me eat humble pie

So, I consulted my adviser, Mr Google, and after many suggestions, I found an exporter in France, and judging by the price, I could sell to local retailers. "Mmmm, go big or go home," I thought. I chose eight different types of mushrooms, placed my order, did the money transfer and waited for the consignment to arrive. I could see this was going to be a success story of note.

Six weeks later, eight plastic drums arrived at my door. There was excitement in the air. My wife Kaeren's excitement was slightly different to mine, eight plastic drums of locker room odour in the passage was not what she had in mind. As luck would have it, it was my

birthday and I was going to treat the family to penne and wild mushrooms for dinner. As I had tons of it, it was going to be a real treat, using all eight varieties of wild mushroom.

Like a true professional, I explained the dish to my guests, mentioning each component, chanterelle, morels, trompet, and so the list went on. All seated at the table, with an award-winning dish in front of them, it was time for the tasting. An uncomfortable silence fell upon the table as my meal went down like a lead balloon. I was standing in front of the class, as my maths mark was being read. It was simply inedible. My father-in-law, the gentleman that he is, made some sound of appreciation, so false that even the hearing impaired would have picked it up.

Aunt Penny, less diplomatic, simply said, "I am sorry Rub, but I cannot eat this." Sometimes, less is more. For the first time, I had to dash off and get takeaway pizza on my birthday. It was painfully humiliating and a great delight to my family, seeing me eat humble pie.

To this day, they have not let me live it down. It was only the beginning of a long, painful and very expensive mistake. Two weeks later, before I could even start packaging my wild mushrooms, the signs of failure started emerging from my drums of 'locker room odour'. Tiny little insects started appearing from the drums and soon the drums were alive with flying insects. My dreams of becoming the number one mushroom dealer in South Africa were fading fast and my appreciation for bolts and nuts growing by the minute.

With all the research I had done, I seemed to have overlooked one of the most important aspects... to establish whether the mushrooms had been treated prior to shipping.

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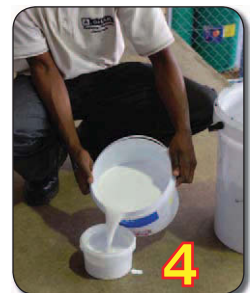
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Measure Cement



Mix Thoroughly



Measure TileLoc



Add TileLoc To Mix



Mix Into Slurry



Block Brush Apply



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