

The Home HANDYMAN

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SA'S
ORIGINAL
DIY
MAGAZINE

Upgrade your kitchen

Planning the layout

Tips on installing new cabinets

Nifty storage ideas



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KITCHEN SHELF**



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WINE RACK**

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Gas stoves

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Guide to servicing power tools

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Prevent “Product Failure” *by doing the correct preparation!*

Paint Quality and Tile Adhesive is often blamed for undesirable results when painting or tiling onto a surface.

However, it is more likely that substrate failure is the cause.

Here is a range of Handy DIY Products that will help you prepare the surface to be painted or tiled by optimising substrate integrity. Visit our website or ask your local hardware dealer for details.



Kitchens – the heart of the home

Kitchens have become a topic that home magazines cover annually and we don't like to follow the pack, but... kitchens have in large replaced the dining room table and even the lounge, with TVs even making their way into the kitchen. Today, the kitchen is a place where families come together to entertain, talk, prepare meals and eat.

With changing needs and more time spent in this area of the home, upgrades are often required. Upgrading your kitchen needn't cost a fortune and there are many ways to maximise the available space. Retail stores have made cabinetmaking a core business focus due to increased demand. This means that you can order cabinet carcasses to size, choose ready assembled units or knock together flat box kits in standard dimensions to save money.

In this issue, we feature an article on the use of computer-aided drafting (CAD) for the hobbyist, which makes it possible to plot designs and even test the working of mechanical components before starting a project. The use of CAD software is also useful when planning and designing your kitchen.

Gas stoves have become a popular alternative due to increasing electricity tariffs and sometimes unreliable supply. Known as gas cookers, these require only a limited amount of maintenance, but ignoring this could result in some costly repairs as neglected components corrode. If you have gas appliances, we recommend you install a gas detection device, and a smoke detector should be part of every kitchen. It is important to note that installation of gas appliances must be done by a registered professional with the requisite knowledge and qualifications.

We have been running a tree of the month article for several issues now and this month's tree is the yellowwood – our national tree. Many of our indigenous trees were harvested unsustainably in the past, with a lot of the timber being used in the development of infrastructure. Since then, conservation efforts have resulted in many species being listed as protected. After speaking to several woodworkers, it seems that many, including myself, are unaware of the processes that need to be followed and the implications of ignoring these. We will endeavour to speak to the authorities in the near future and clear up any confusion that may exist.

There is also an article on changing the way you make a wood-burning fire to keep you warm during what we hope will be the last month of winter.

Gareth Greathead, Editor



The Home HANDYMAN

www.homehandyman.co.za

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PO Box 48, Cramerview, 2060
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email: editorial@homehandyman.co.za
Tel: 011-462-5645 / 5796 / 3213
Fax: 086-551-0749
Publisher: Allan Swart
Associate publisher: Michelle Funke

Editor: Gareth Greathead
Assistant Editor: Aarifah Nosarka,
Feature writers: Lynne Yates, Loren Shirley-Carr, Clifford Roberts
Sub-editors: Lynne Yates, Loren Shirley-Carr
Technical consultant: Denis Lock
Layout & design: Rosemary Johnston-Fitch

HOW TO CONTACT US:
Editorial enquiries:
Tel: 011-462-5645 / 5796 / 3213
Fax: 086-551-0749
email: editorial@homehandyman.co.za

Advertising representatives:
Shelagh Page
Tel: 011-723-9000 / Cell: 082-822-5959
email: shelagh@homehandyman.co.za
Debbie Heard
Tel: 011-465-4265 / Cell: 083-302-7493
email: debbie@homehandyman.co.za

HOW TO SUBSCRIBE:
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By hotline phone: 011-462-5645 / 5796 / 3213
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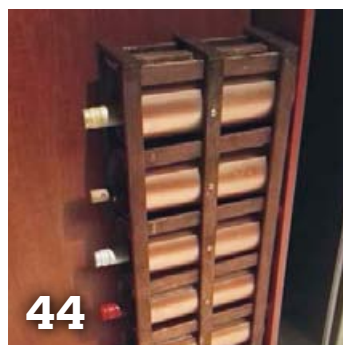
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Protect your hands

Whether in the workshop, the garden or outdoors while riding – MX, trails, mountain paths and even roads - Tork Craft has the solution in hand protection. Tork Craft now has a comprehensive range of gloves that covers all these markets at affordable prices, and they look the part. Bikers are sure to appreciate the Blue Air Mesh and Spandex Red gloves that feature terry cloth on the back of the thumb. This is handy to give your goggles a quick wipe on the fly, or even to wipe away sweat when you stop for a break.



For more information

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

Effective grout sealer



Unsealed cementitious grout tends to be porous, resulting in visible signs of dirt and discolouration caused by everyday use and cleaning. The most effective way to solve this problem is to apply Tal Grout Sealer before discolouration occurs, or after thoroughly cleaning the affected grout before application of the product. It is designed to seal

cementitious grout joints, both in the green (wet) and cured states, in interior and exterior tile installations, such as walls, floors, countertops and showers. It is available in a 300ml aerosol can, which covers approximately 400 linear metres of grout. The residual film on glazed tiles dries clear and does not affect the original colour finish.



For more information

Visit: www.tal.co.za
Tel: 011-206-9700



Multi-purpose accessory sets

Make DIY tasks easier with Bosch V-Line accessory sets that come in cases. The range has five sets and contain between 41 and 91 accessories.

V-Line accessory sets:

- 41-piece drill and screwdriver bit set with angle driver.
- 48-piece titanium drill and screwdriver bit set with a magnetic stick.
- 68-piece drill and screwdriver bit set with angle driver, magnetic stick and a folding knife.
- 83-piece titanium drill and screwdriver bit set with an LED torch and adjustable spanner.
- 91-piece titanium drill and screwdriver bit set with ratchet screwdriver and magnetic stick.



For more information

Visit: www.bosch.co.za
Tel: 011-651-9600

Compact planer thicknesser

One of the biggest challenges when working with solid timber is milling it to usable proportions. The relatively high cost of thicknesser planers inhibits many from keeping these in their workshop, meaning reliance on others. The Toni Planer Thicknesser solves this problem by offering an affordable, compact bench-top machine.

Features and specifications:

- Motor: 1.28kW
- Cutter block speed: 8000 rpm
- Surfacing table: 737mm x 210 mm
- Thicknessing table: 250mm x 204mm
- Plane width: 204mm
- Combination top jointer and planer
- Two high speed blades
- Machined table top
- Precision adjustment knobs



For more information

Visit: www.newcopowertools.co.za
Tel: 011-315-1504



Antique wood preservation

Preserving an original wood finish means preserving the authenticity and value of an original. On the other hand, stripping an existing wood finish can strip value from the piece. The first in the Howard range was Restor-A-Finish, which was designed to revive and restore the original colour and lustre of wood without removing any of the existing finish. Since then several other specialist restoration products have joined the range and cater for every need.



For more information

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

Light everywhere you go



With the My-Powa Kit you have access to light anytime, anywhere. The kit comes complete with a solar panel, a 1 watt LED light, a cable, switch and powerbank. The kit comes in a compact carry case.



For more information

Visit: www.sungridgroup.com
Tel: 021-380-0302

Pumping water upstream



Water shortages are likely to remain a concern in the years to come, along with the potential of increased water shedding efforts. As with electricity, we will need to find off-the-grid solutions to maintain water supply. TRADEpower Jet Pumps have the ability to lift water from low-lying water tables (boreholes or river edges) or storage facilities (rainwater harvesting tanks) to supply the home or low flow irrigation systems. The Jet Pumps are superior to centrifugal pumps as they can dispose of the air originating from the water column, increasing reliability.



For more information

Visit: www.lgtools.co.za
Tel: 031-717-6800

Unblock the kitchen sink

LiquiDrain is a drain-cleaning agent formulated with sulphuric acid to dissolve most organic material found obstructing drains. This includes hair, grease, rags, sludge, soap and foodstuffs.

Use with care:

- Wear protective clothing such as goggles, a mask and gloves.
- Do not lean over the drain or area being cleaned.
- Beware of the gas created by the product.
- Work in a ventilated space.
- Keep away from children and animals.
- Do not use on aluminium, enamel baths or chrome.



For more information

Visit: www.ashak.co.za
Tel: 086-112-7425



VOICE YOUR VIEWS Do you have any thoughts or comments on DIY issues?

Callipers used in woodworking

Life after work

I really enjoyed the Hobby X show at the Ticketpro Dome in March – it is worthwhile to visit if you haven't already been. I recently joined the Witwatersrand Woodworkers' Association after three visits to their meetings. They are a great bunch of guys and very easy to get along with. The club has had some trouble attracting new membership and would like to strengthen its relationship with the magazine to build on that.

Back on a more personal tone, I encourage younger people to take some advice from a pensioner. Don't ignore the importance of a hobby; it will serve you very well once you go on pension. I worked very long hours as an engineer on emergencies and found with a shock how 'empty' and unrewarding life becomes once you stop working. Luckily, I kept all my old woodworking tools and could rekindle my interest in model building.

Douw Kruger, Johannesburg

Ed replies: Hi Douw, I was contacted by the association after receiving your letter and attended a committee meeting recently where we discussed ways to promote the activities of the club. Of special note is the training centre that is going largely unused despite the high cost of entry to the hobby.



Winning letter

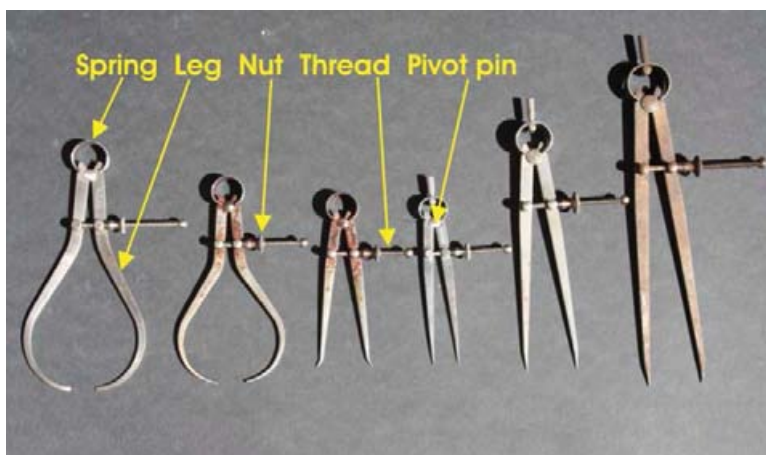
This month's winning letter comes from Nick Zambatis who wins a Makita DHP459Z Cordless Impact Driver Drill plus battery

I am a great believer in education and *The Home Handyman* is a great magazine for educating people about DIY and the use of tools. There was an article in the May issue on 'How to make a kitchen egg rack'. On page 35, there is a person holding a pair of callipers. The caption says, "Use wood callipers to check your progress". The term 'wood callipers', although loosely applicable, isn't technically correct and the correct terminology is spring bow callipers.

I have sent in an image that shows a number of different spring bow callipers and dividers from my own collection. It pictures, from left to right, large outside calliper, medium outside calliper, small inside calliper, small spring bow dividers, medium spring bow dividers and large spring bow dividers. The latter was acquired from a deceased estate and is awaiting rust removal. Items two and three still have red rust preventative treatment on them from my days as an engineering apprentice.

I have some advice on how to look after your callipers. The adjustment screws are usually small in diameter with fine threads to allow for accurate adjustment. This means that the threads have to be very carefully cared for. Always ensure that the threads and the central pivot pin have a tiny amount of oil on them to minimise wear during use. When making large adjustments, squeezing the legs together gently helps to relieve pressure from the threads. The nut usually has a round knurled (serrated) outer diameter to assist in gripping. This should be turned to the approximate position for use. Once you have arrived at a close proximity setting, then the arms can be carefully allowed to open to the nut position and final adjustments made by turning the nut.

Malcolm Cunningham, by email



Indigenous woods and the law

WINNING LETTER

Firstly, as a subscriber I find great value in *The Home Handyman*, an excellent and proudly South African magazine filled with information of practical worth. It must be said upfront that I'm a retired conservationist who was active in the profession for 44 years. I don't want people to think that I'm waving a stick at them, but rather want to inform people about the importance of protecting rare indigenous trees. Many indigenous hardwoods are slow growers (trees which have been around for hundreds if not a couple of thousand years), but can be destroyed in an instant.

I have been a woodworker for most of my life and read the projects and comments on the use of leadwood (*Combretum imberbe*) with much interest. The age and growth rate of leadwood trees was determined by a researcher at the CSIR using carbon dating. This showed that trees of a relatively small diameter are several hundred years old – extremely slow growers.

Leadwood, as well as a number of other indigenous tree species, are protected in terms of the National Forests Act 84 of 1998. I would recommend that each of us get hold of a copy of the Act, together with a list of the protected trees in terms of this Act. Section 15 of the Act deals with the 'Effect of declaration of protected trees' and explains what 'protection' means.

Chapter 7 covers 'Offences and Penalties'. Penalties for contravening Sections 15(1) (a) and 15(1) (b) of the Act are first category offences, for which '...a fine or imprisonment for a period of up to three years, or to both a fine and such imprisonment.' may be imposed. In the case of first category offences, the penalty would be pretty stiff, maybe several thousand rand.

In some instances, it may be possible to obtain a permit to collect, transport and possess material of a protected species from the governmental department

responsible for the administration of the Act; in this case, I assume the Department of Agriculture, Forestry and Fisheries.

Nick Zambatis, by email

Ed replies: Hi Nick, thank you so much for sending through the list of protected trees and related legislation which we will put up on our website for our readers. I have since spoken to several woodworkers and none are aware of what you can keep, use and how to ensure legal compliance. We will use the information provided by you and speak to the authorities before putting an article together to clarify. Ignorance has no ground in a court of law and together we need to do what we can to preserve this precious resource of cultural significance.

Find out which trees are protected under SA legislation

Go to: <http://bit.ly/1Xot1ng>

WIN!

A Makita DUB182Z 18V Cordless Blower plus battery and charger

Share your opinion

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

Email: editorial@homehandyman.co.za

Fax: 086 551 0749

By mail: PO Box 48, Cramerview, 2060

Letters may be edited for length and clarity

Please note: Winners' prizes may take up to six weeks for delivery once the issue is on the shelf. The prize sponsor sends out the prizes. Prizes are not exchangeable.



Project management services

If someone had between R5 million and R20 million to invest they would likely enrol the services of an investment expert. However, when the average South African invests everything in a house, they tend not to afford that capital the same privilege. Without competent management delays, overspend and quality issues are problems that can plague building projects, and these problems can run on for years after completion date (something like we see happening with government tenders).

Team Austin is a building and construction project management company based in Hout Bay, Cape Town. It consists of a team of qualified professionals whose function it is to monitor and oversee building processes every step of the way. Doug Austin, Team Austin owner and leader, says, "Team Austin provides a very personal and comprehensive construction service, with each contract professionally coordinated and managed. We pride ourselves on our reputation and quality. Our logo and image have been updated to reflect our commitment to the 'anything is possible' dream we espouse and strive towards for our clients."

Project management is the professional solution to overseeing construction projects; from the first line drawn on a plan to the final handover of the keys, it is the sensible, professional option. Any high-end construction will have numerous subcontractors,

who must be carefully coordinated by the project manager and an on-site construction foreman. These foremen must be technically skilled and have the knowledge and experience that enables them to conduct the construction seamlessly.

Throughout the process from the initial planning stage, project administration is key to keeping the costs within the initial budget. "Changes that occur are communicated with the client, and strictly controlled to ensure that no financial shocks derail the process. Project management is specifically geared to control the inevitable changes that could affect deadlines or costs. Finally, the personal relationship with the client lasts long after the building is completed, ensuring that the quality of the product and the client's total satisfaction are paramount," says Doug.



Working with Wood Festival

The second Working with Wood Festival for the year will take place at the NMMU Saasveld Road Campus in George from 26-28 August. The exhibition will be in association with the Association of Woodturners South Africa (AWSA) and in partnership with the American Association of Woodturners (AAW). The School of Natural Resource Management at the Nelson Mandela Metropolitan University will also take an active part this year.

The show will feature top woodworking experts, two international guests – Carmen De La Paz from the USA and Chris Pouncy from Sorby in the United Kingdom – as well as seven local turners – John Wessels, John Speedy, Dave Stephenson, Mervin Walsh, Richard Muller, Jan Conradie and Charlie Letsoalo, who will be on the go at the show.

The festival's highlights include a large exhibition of tools, equipment and demonstrations of the latest woodworking and woodturning equipment. Special prices on equipment and supplies will be on offer as well as a special programme for women in woodturning and the launch of the SA Turners without Borders – a project in partnership with AAW.

The Working with Wood organisers, Vermont Sales, will have all equipment and products on display and will be presenting the latest tools and technology at the exhibition. Some of the brands include Festool, Triton, Kreg, Howard Products, Pro-Tech, Tork Craft, Bessey, Felo, Alpen, MPS, Spring Tools, Mag Switch, Aircraft, Drill Doctor, Armor and the latest revolutionary circular saw from SawStop.



For more information

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



Heating sources such stoves or ovens are a main contributor of fires in the home

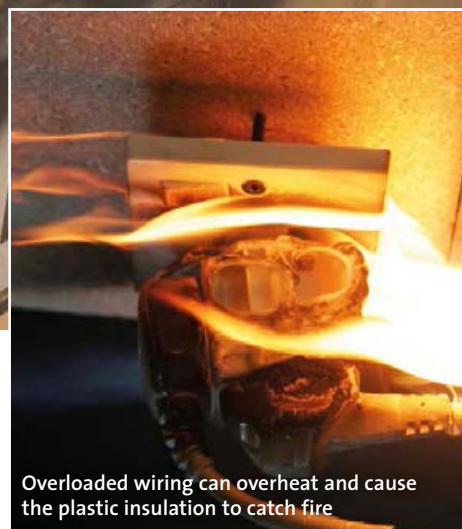
Fire safety

Statistics state that an estimated 890 South African lives could be saved each year if all homes had working smoke alarms. ASP Fire CEO Michael van Niekerk says that electrical sources are known to be the leading causes of home fires. Fires caused by heating sources such as heaters, irons and stoves or ovens are also a main contributor of fires in the home. Michael says, "The most lethal aspect of a fire is smoke as it moves away from the seat of the fire and it only takes a few breaths in a smoke-filled room to kill a human being."

The first aspect of preventing fire is a common sense approach, which includes operating electrical equipment and extension cords safely and minimising risk such as not leaving cooking oil on a hot stove. "Investing in a fire detector to protect your family and possessions is just as important as sound security. It can provide sufficient warning to allow your family to safely evacuate the property." He suggests linking smoke detectors to the burglar alarm.

The earth leakage is designed to trip the electrical supply and de-energise the circuit when there is a short circuit. A faulty earth leakage will not trip when there is a short, resulting in the electrical cables overheating, causing the plastic insulation to burn. "Test the earth leakage on the distribution board at least once a month by pressing the 'TEST' button"

Another vital aspect is to ensure that every home has a fire extinguisher and that every family member knows how to use it. A water mist fire extinguisher is effective on various types of fires, and is not harmful to humans and the environment. This is unlike CO₂ extinguishers or dry chemical powder (DCP) fire extinguishers, which limit vision in a confined space or room, and have negative health and environmental effects on people, pets and on the surrounding area. "Servicing of the water mist extinguisher is cheaper because it only uses water, unlike a DCP extinguisher, where the powder compacts and hardens and needs to be removed and inspected every year."



Overloaded wiring can overheat and cause the plastic insulation to catch fire

"The water mist extinguisher works by cooling the fire down, turning heat into cool steam. It disperses high-energy microscopic water mist particles through its nozzle to suppress fires and is safe enough to be used in any area. It creates a protective shield that helps you get past a hot environment to help you and your family get out."

"There is an acronym called PASS, which stands for 'Pull' the fire pin, 'Aim' at the bottom of the fire, 'Squeeze' the extinguisher and 'Sweep' to cover all sides. Each of the family member should know and practise it."



For more information

Visit: www.aspfire.co.za
Tel: 011-452-2169

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[HTTP://SOEK.IN](http://soek.in)

Repacking cordless battery packs

We received queries from two readers asking about replacing and/or upgrading battery packs in cordless power tools:

Nickel-cadmium (NiCd) batteries were used extensively in cordless tools in the past but these have since been replaced with nickel-metal hydride battery (NiMH) and lithium-ion (Li-ion) batteries for the most part. I'm sure many DIY'ers and woodworkers have cordless drills with old NiCd batteries that no longer work. These end up lying around gathering dust and taking up space in the workshop. Is there a company in South Africa that can convert these old batteries into Li-ion battery packs?

Ken Pauls, by email

In your May 2015 issue you featured an article headed 'Power up' discussing the different battery types. The article highlights the problems with the NiCd battery packs and I have been told that it is possible to have these batteries repacked. I have the Triton 18V Cordless Drill powered by 2.0Ah NiCd batteries (two supplied). This has been a wonderful tool hampered by poor battery performance right from the date of purchase! They run down extremely quickly and I always need to have one on charge while using the other. My questions are: Is it in fact possible to have these batteries repacked? Where can I have this done? Is it economically viable?

Eugene Taljaard, by email

Ed replies: You are not the only readers who have asked this question. It must be said

that while newer battery technology is superior, NiCd remains the most durable of batteries and is more able to withstand more abuse. The answer to all is: Yes, it is technically possible to upgrade any battery pack, but with varying levels of complexity and all have been found to be cost inhibitive.

While possible, converting to Li-ion is not recommended as gearing and internal circuitry is customised on models that come with Li-ion battery packs in addition to specialised chargers. The cost of burnt out wiring, motors, batteries and the possibility of creating a fire hazard makes the risk too high to justify, even without consideration of the specialised charger required.

When it comes to NiCd you can replace the battery cells with the same cells, or cells of a higher capacity, such as NiMH 3.0Ah and still use the same charger. Unfortunately, after some research I found that the cost of replacement is not economically viable. Whether you choose to upgrade with



Gas stove maintenance

This is a photograph of a gas stove that needs some cleaning and a service. Could you provide some guidance or a step-by-step guide on how to clean and maintain gas cooker tops and burners? Also gas stove maintenance in general. This might make a lovely feature article in the magazine.

Avinash Singh, by email

Ed replies: We took heed of your interesting query and featured gas stoves in this very issue! Thank you for your suggestion.



NiMH or stay with NiCd, each cell will cost around R100. For an 18V pack, you will require 15 cells (1.2V) at a total cost of R1 500. Original packs from the maker should cost less than this. Therefore, unless you are unable to source packs from the original manufacturer, building your own packs is not a viable option. Cordless tools using NiCd and NiMH normally use sub-C size cells, which can be bought from most hobby shops and battery distributors such as Carter Agencies.



For more information

Visit: www.rayovac.co.za
Tel: 011-608-2003



Elliptical router jig

I would like to cut a piece of wood in an oval shape. On the Internet, only in the US of course, there are jigs available that attach to a router. They are called elliptical router jigs. Do you know of anyone in South Africa who stocks such items?

Brendan Burmeister, by email

Denis Lock, our woodworking and routing expert, replies: Do you just want to cut a single ellipse, multiples of the same size ellipse or different size ellipses over a period of time? If you said yes to either of the first two, it is a pattern routing application and you need to make a pattern (or have one made). If you need to make a great variety of ellipses over a period of time, you need the jig you mention. Trend-UK makes such a jig, which is distributed in South Africa by Strand Hardware based in Port Elizabeth.



For more information

Visit: <https://www.strandhardware.co.za/trend-mini-ellipse-set>
Tel: 041-585-6996



Preserving a paint job

I completed a comprehensive preparation and painting job of the entire outside of my home in January 2015. I took a lot of time doing the waterproofing, skimming selected areas, and then finally painting. What can I do to maintain and prolong the life of the paint on the walls so that it always looks new, clean and neat? How often should I perform these procedures? I used Dulux Weatherguard paint in white.

Avinash Singh, by email

Technical advisor at Dulux SA, Dineo Mokgoateng replies: Since the outdoor coating is white dirt will be more noticeable. Should you experience stubborn dirt or dust marks not washed away by rain we suggest you use Dulux Pre-Paint Sugar Soap and rinse the walls with water from the garden hose to remove the marks.

Should you encounter reoccurring damp in future, the root cause of the damp must be determined and corrected. Dulux Pre-paint Dampshield, can tolerate up to 50% moisture and can be used as a primer on affected areas once all the preparation has been completed. If the moisture issue persists you will need to consult a waterproofing specialist.

To activate the guarantee that comes with Dulux Weatherguard Fine Textured you will need to register on www.dulux.co.za



Winning query

This month's winning query comes from Eugene Taljaard who wins a set of seven Felo screwdrivers from Vermont Sales

WIN!

A Tork Craft Capsule Task Light from Vermont Sales

Ask our experts

Send us your DIY queries and you could win!

Send your query to:
The Home Handyman DIY Queries,
PO Box 48 Cramerview, 2060 or Fax: 086-551-0749
Email: editorial@homehandyman.co.za
Remember to include your physical address and telephone number during office hours.

Please note: Queries will be answered in the magazine. Winners' prizes may take up to six weeks for delivery and are sent by the prize sponsor. Prizes are not exchangeable.





Kitchen DIY

A kitchen can be one of the most expensive rooms in the house to remodel, but with some savvy DIY skills, you can do it yourself!

By Gina Hartoog

Remodelling a kitchen can be very costly. If you want a kitchen company to handle everything, you're going to have to pay. For many homeowners these costs are prohibitive and they end up putting off the job for several years, perhaps even indefinitely.

Some companies now offer a kitchen design service where you bring in your measurements. They lay out your kitchen and give you a quote on the cabinets. These can be ordered ready-to-assemble or pre-assembled.

Once the cabinets arrive, you install the cabinets and complete the project. With the right skills and tools, you can do your kitchen yourself – with significant savings.

Planning your kitchen

By considering your personal needs, what you want in your kitchen and how you want the work to flow, you can plan a functional kitchen that uses space in an optimal way. Once you understand the various zones, you will have a good idea about how you can incorporate this into your own floor layout.



Know your numbers

Cabinets supplied by manufacturers are often sold in standard dimensions and planning your design around these can save time and money. The dimensions below are average cabinet sizes, however some companies may differ on what they offer.

Counter height

- Between 895mm and 905mm, depending on the thickness of the countertop

Wall units

- Depth – 300mm
- Height – 360-1 080mm, depending on cupboard type
- Width – varies according to cupboard size/type – from 150-1 200mm

Base units

- Depth – 560mm
- Height – 870mm
- Width – varies according to cupboard size/type – from 150-1 200mm

Tall floor units

- Height – 2 100mm or 2 450mm
- Depth – 600mm
- Width – varies according to cupboard size/type – from 450-1 200mm

Ask for it by name

Need to bond your counter tops down? Sika MaxTack® is your solution

Sika MaxTack® is a water-based instant grab adhesive with excellent adhesion properties. This multipurpose high-strength adhesive sticks almost everything to anything and eliminates the need for nails and screws in many DIY and repair jobs.

- Sika MaxTack® can be used for kitchen counters, skirting boards, polystyrene cornices, wood frames and many more decorative substrates.
- Sika MaxTack® is ideal for many substrates: Wood, mortar, concrete, fibre cement, anodised aluminium, rigid PVC, ceramic, polystyrene, painted substrates, etc.

Application:

Step 1: Surfaces must be clean, sound and dry.

Step 2: Cut the cartridge above the thread.

Step 3: Screw on the nozzle and cut the nozzle to desired size.

Step 4: Insert the cartridge into an application gun and start to apply.

Step 5: Immediately after applying Sika MaxTack® position the bonded components and press them well together.

Step 6: After 48 hours the adhesive is completely hardened.



For more information

Sika Customer Services

Tel: 031-792-6500,

Fax: 031-700-1760

Email: headoffice@za.sika.com

Website: www.sika.co.za



Instead of kick plates, consider stylish cabinet legs for your units

Accurately measure the size of the cabinets



Questions to ask yourself

- Do you want tall wall units? Can you take these to ceiling height? You may not be able to easily reach items, but the extra storage can be used to store items used less regularly. Purchase a two-step ladder and mount it in your broom cabinet.
- Are you considering kick plates or cabinet legs? Kick plates close off the bottom of cabinets, but they must be properly sealed to avoid water damage. If you



There is a variety of options and styles for cabinets, doors and handles

For neatness, capping was added to the tops of the cabinets



choose cabinet legs, your entire floor must be tiled. There will also be a section of wall (about 150-200mm) that is visible under the cabinets. This can be tiled or, if plastered, it may be painted. If you have a bad back, perhaps this isn't for you because you will have to get down and dirty to clean this space properly.

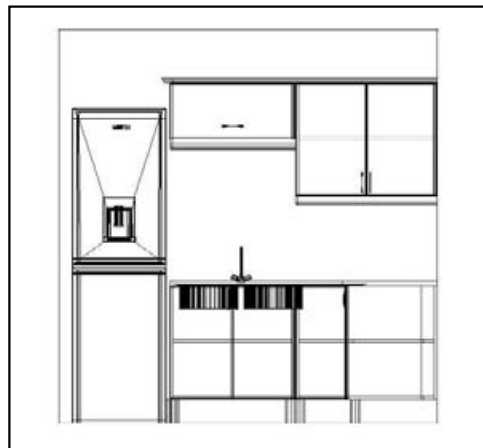
- If electrical plug sockets need to be moved or new plugs installed, you need to hire an electrician to do this.
- Are you planning on moving the sink from its existing position? What plumbing would be required?
- Do you want to include cappings and light shields on the cabinets? If you are putting lighting under the cabinets, do you have enough plugs?
- What about countertops? There are a number of options available to the homeowner, but costs vary significantly and you will need to include this into your overall budget. The company that makes your cabinets may be able to supply a standard post-form top. Post-form tops must be properly sealed to avoid water damage.



Tip

A compound mitre saw is a must if you plan to add cappings and light shields to your cabinets.

From drawings to completed kitchen



▲ 2D drawing of the proposed kitchen



▲ A 3D design gives a good idea as to how the kitchen will look



▲ The completed kitchen

Ask for it by name



Den Braven High Tack – the internationally acknowledged heavyweight adhesive

High Tack has extremely high initial adhesion power and can be used for adhesion of substrates of up to 20kg with no mechanical fixing required. It is odourless, non-corrosive, UV and water resistant and conforms to the SA Green Building Council standards. The cartridge is also recyclable.

Den Braven High Tack adheres to many substrates – stone, windowsills, glass and glazed surfaces, porcelain, coated metals, stainless steel, finished wood and many more. Ideal to secure kitchen countertops, tiles, splash backs and kick plates.

For more information

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www.denbraven.co.za

- Measure all existing appliances (hob, under-counter oven, extractor fan, dishwasher, microwave, fridge/freezer). If you plan on getting new appliances, take accurate measurements of these before you finalise the design.
- What other storage cupboards do you want? Consider a microwave unit, spice rack, wine rack, walk-in pantry, pantry larder, tray cupboard, pot drawers, etc.

Taking kitchen measurements and ordering cabinets

Before you head to the store, you need to take proper measurements of your kitchen. This is very important as the designer will design your kitchen based on these measurements.

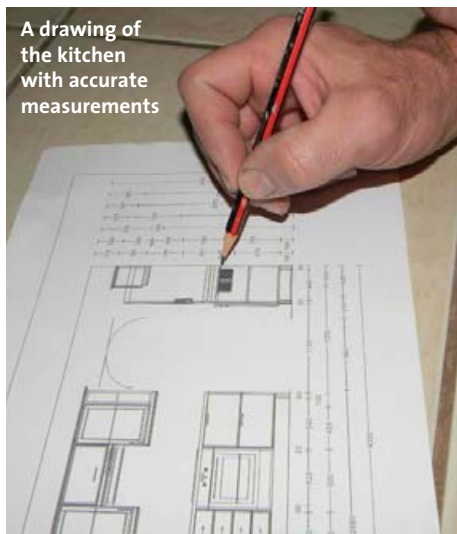
Step 1: Draw the layout of your kitchen. Include windows and doors.

Step 2: Measure the floor to ceiling height. Include this on your drawing.

Step 3: Measure the walls – corner to corner. Note down all measurements

Step 4: Measure windows and doors – their width, height from the floor, length from a nearby corner, etc.

Step 5: Make notes of where all electrical points are. If you are planning on moving



A drawing of the kitchen with accurate measurements

them, include on the drawing where the new points will be.

Step 6: Note where taps/plumbing points are. Measure accurately from the nearest corner.

Once you have your drawing and accurate measurements, visit the company and have the designer lay out your kitchen. You will need to choose a colour for your cabinets. There is a variety of material options and styles for the cabinets and doors.

You will also need to select your cabinet legs (if required) and cupboard handles. Once complete, the designer should be

able to show you a 3D image of your proposed kitchen. Check all views carefully to make sure that you have included everything you require. Once you accept the design, you will be given a final quote.

Skills and tools for a 'DIY' kitchen

Accurate measurements

You will need to measure accurately for the kitchen layout – where to install cabinets, when attaching the cabinet legs as well as measuring and attaching the handles once the doors are fitted. If a cabinet doesn't fit the space and you force it into place, the error will become evident later when the doors don't fit.

Have the right tools

Without the right tools you will end up frustrated and unable to complete simple tasks. You should have most of the tools required, but pull them out and transfer them into a single toolbox to avoid having to search for tools throughout the job.

Know how to read and interpret a drawing

You will need to be able to read this plan and transfer measurements to the kitchen accurately.



◀ Laser levels make straight lines easy



Tip

Laser levels and laser distance measurers are a fairly new development and are useful in planning as well as fitting to make sure everything lines up.

Ready-to-assemble or pre-assembled cabinets?

Your cabinets may arrive assembled (without the doors) or as flat pack 'ready-to-assemble' units. Some companies offer both options, while others provide one or the other – it is a personal choice, based on the time you have for the assembly and your budget. Both options have various pros and cons. Pre-assembled units can be damaged during transit, so inspect your cupboards carefully when they arrive. On the other hand, flat pack units can be time-consuming to assemble before you can install them.



Idea

If you enjoy a glass of wine after a busy day, find a spot for a wine rack. Order a standard tray cupboard and purchase a chrome six-bottle holder. Remove the middle shelf and insert the chrome holder and attach with screws from the side.



Choose between ready-to-assemble or pre-assembled cabinets to install



With the right skills and tools, you can install cabinets yourself

Gutting the old kitchen

After payment, the designer will let you know how long the cabinet-building process will take. In most cases, this is no longer than 15 working days. You can plan a timeline for your project based on this.

Gutting the old kitchen may seem like a daunting task, but with an electric screwdriver to remove screws, you'll quickly be able to disassemble the old cupboards. Once all cupboards and existing tiles have been removed, you will be able to gauge if any building work is required.

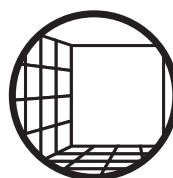
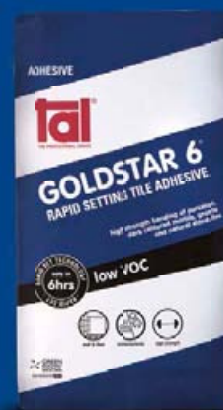
Nothing will go smoothly if your existing walls are not straight – tiling will be a mess and the cabinets will be very difficult to install. Many homeowners are very surprised to find raw brick behind the old cabinets. If the new cabinets are to be placed there, this isn't a problem, but if the layout of the kitchen is changing, you will need to have these walls plastered or do it yourself if you are able to plaster. If you are installing cabinets on legs, your floor must be tiled wall-to-wall. ✂



An electric screwdriver makes removing screws an easy task

RAPID-SETTING TILE ADHESIVE

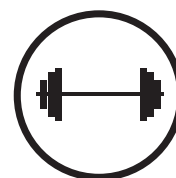
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A properly laid out and organised kitchen is a pleasure to work in. Find out how you can optimise your kitchen space

Organise your kitchen

A kitchen is more than just a place where food is prepared; it is where family and friends congregate, where meals are created together and eaten while sitting around the kitchen table or breakfast nook. To accommodate all of this activity without it descending into chaos, the kitchen needs to be well organised, with all necessary equipment stored away to avoid clutter, but within easy reach.



By Loren Shirley-Carr

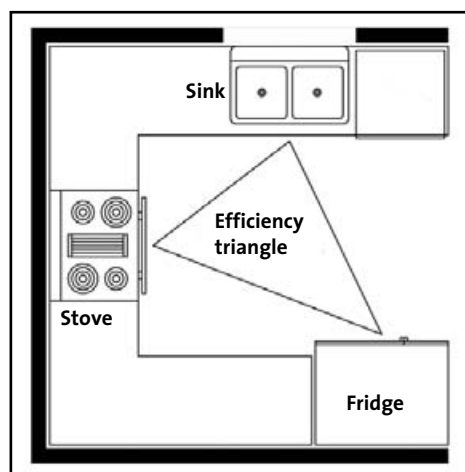
Efficient layout

The kitchen work triangle is a time-honoured layout to ensure a good work flow in your kitchen. The idea is that when laying out your kitchen, if you draw a line connecting the three most important work areas – the stove, the refrigerator and the sink – you should have a triangle. Efficiency is the goal here, ensuring all the important workstations are near the cook, without placing them so close that the kitchen becomes cramped. In general, the distance between these work areas should be between about 1.5m and 2.5m. If these distances are too small, it can make the kitchen feel cramped; if too large, it can make meal preparation a hassle.

Take additional functions into account when working out your triangle.

Preparation space is not included in the triangle, but it is usually a good idea to have counter space next to the sink and next to the stove. Also take into account the height of your countertops; the distance between your elbows and the countertop should be about 10-15cm. Although a standard countertop height is 900mm, if you are taller or shorter than average, don't hesitate to ask your designer to adjust the countertop height.

The work triangle may not work in all kitchens, however, as sometimes there is more than one cook or more than three workstations, especially in bigger kitchens. You need to work out what works best in your home. It may be a better idea for you to divide your kitchen up into work zones, grouping appliances and items according to



the task they perform. So, you might have a tea and coffee zone, where you store your mugs, tea bags, coffee, sugar, the kettle and teaspoons; a cleaning zone with the dishwasher, sink, washing up liquid, cloths; and a cooking zone around the oven with pots, pans, food preparation utensils and knives. These zones will ensure that people doing different tasks in the kitchen are less likely to bump into each other.

Pay attention also to the levels in your kitchen when designing it. Make sure that frequently used items are kept at an easy-to-reach level, while items used less often, like fondue sets or platters, are stored high up or low down.



Put utensils in hanging containers



A vertical spice drawer saves space and puts all your herbs and spices within easy reach



Put up attractive shelves



Store foods that you use regularly on the counter tops in glass jars with labels on them

Efficient storage

Today's smaller living spaces require smart design and storage solutions. Modern open-plan kitchens enhance the feeling of space in smaller kitchens, and combine this once functional room with dining areas to create larger entertainment areas. However, this opening up of the kitchen to other areas of the house means that you need to be smart with storage so that the tools and accessories essential to kitchens don't add a cluttered feel to your living areas. Here are some ideas to help you out.

Shelves

If you lack cabinet space, put up some shelves. Good spots for shelves include over the sink, next to the sink or even right under the ceiling, where you can store items that are not used often, such as serving platters, vases or tea sets. To keep your open shelving from looking messy, follow these tips:

- Group like things together, such as bowls, cups and plates in one place and baking supplies in another.
- Place the more attractive items in your kitchen on the open shelves, like your dinner sets or anything you like the look of.
- If you want to store food on the shelves, invest in some attractive baskets or containers to put them in so that unattractive packaging is hidden. Use glass jars to store flour, sugar, rice and pasta. Label these baskets and jars for easy identification.
- Some items can be stored on your counter tops in attractive jars, like pasta, rice and flour, which you can label.

Drawers

Drawers offer great storage solutions as the contents can be seen at a glance and you don't have to dig things out from the back of a cabinet. By placing drawers of various depths under your counters, you increase the accessibility of various items. Pull-out drawers are also a good idea in grocery cupboards or the pantry as you can access items stored at the back more easily. Put some dividers in your drawers to keep things tidy. A vertical spice rack drawer keeps all your herbs and spices stored neatly and within easy reach, without taking up much space.



Drawers in the grocery cupboard mean that all your food items can be seen at a glance



A space-saving under-counter wine rack with recipe books below

Under-counter space

A few necessary kitchen components can be stored in built-in compartments under the counter tops. You can have your rubbish bin, the most unattractive element in any kitchen, hidden under the counter behind a swing door, or pull-out drawer, made to look like part of the kitchen cabinets. You can also have a wine rack installed under the counters or shelves for cookbooks.

Hooks

Hooks are your best friends in the kitchen. You can install a rail above the sink or stove with hooks on which to hang your pots and pans, or against a cabinet for all your cooking utensils. Hooks can also be put into a corkboard installed inside your cabinet



Simple DIY storage attached to a cupboard door



Shelf and hooks to store pots for easy access



Rails of hooks attached to the underside of kitchen cabinets

doors, where you can hang measuring cups, oven mitts, cooking utensils or even pin up recipes or shopping lists. Or, put in some Command hooks and hang a small basket or plastic pocket organiser inside the cabinet under your sink to store sponges, cloths and washing up liquids. Command hooks can also be used on any open wall space you have for hanging attractive bread boards, baking tins or colanders.

Portable furniture

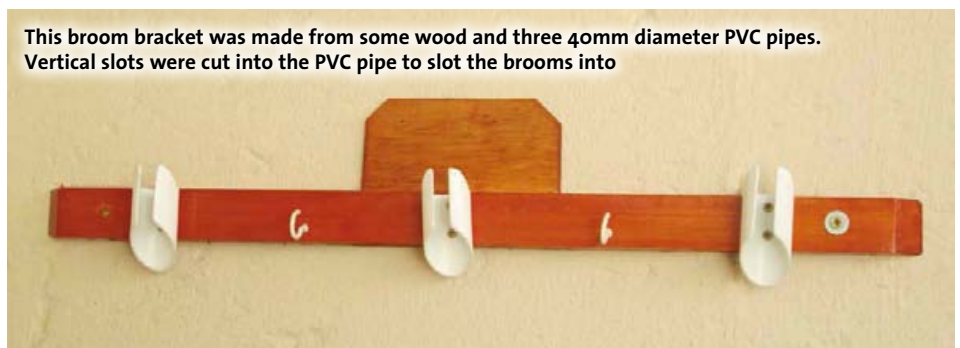
Moveable furniture can give you more storage or worktop space that can be stowed away when not needed. A kitchen cart on wheels can extend your storage area, give you more counter space and can be used as a tea trolley or drinks cart when entertaining. A narrow, three-tier vegetable rack on wheels can be stored in awkward spots, and moved around when needed. A moveable butcher block or island gives extra storage and working space. These often come with shelving space underneath for prep dishes, appliances and cookware. ✂



Hang a small basket inside the cabinet under the sink for all your cleaning products



Maximising cupboard space



This broom bracket was made from some wood and three 40mm diameter PVC pipes. Vertical slots were cut into the PVC pipe to slot the brooms into



Hide away your rubbish bin in a pull-out drawer



A movable kitchen cart can extend your workspace and storage area



Computer-aided drafting for the hobbyist

Jeremy Johnston-Fitch, design engineer at Hyflo Southern Africa, explains the benefits of computer-aided drafting software

Ever wanted to know how many tiles it will take to cover your patio or whether your fixtures will fit in your new kitchen? Perhaps you have paid a bomb for a draftsman to redraw your hard copy house plans on a computer. Did you know that you can make drawings on your own PC at home? Until fairly recently, computer-aided drafting packages (CAD) have been too expensive for hobbyists and DIY enthusiasts. But that has all

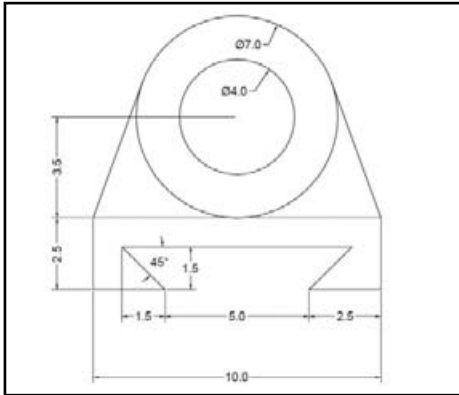
changed. CAD programmes have become much easier to use and many of them are inexpensive or free. There has never been a better time to learn to use CAD. You don't even need a large format printer. Once you have created your drawings, you can have them plotted at a printing shop like PostNet or Jetline.

2D drafting

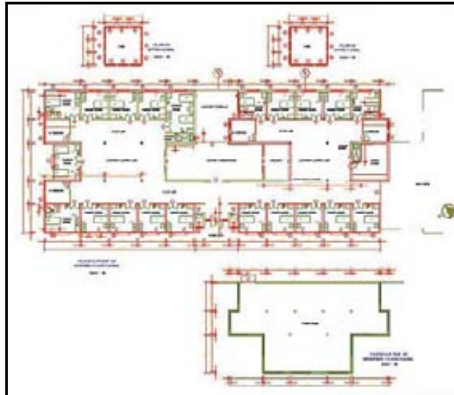
CAD offers many advantages over traditional drafting methods. Many 2D drawing programmes are essentially digital drawing boards. These offer the same sort of advantages that word processors do compared to type writers. You can copy, paste, move and rotate elements in your drawing. You can work with 100% precision, which makes graphical calculations easy. This is great for those of us who have forgotten how to do trigonometry.

2D drafting is ideal for drawings that are simple or flat – drawings that don't have a lot of hidden detail. For example: building floor plans, marble counter tops, security gates and shelving. You can email a 2D CAD file to a machine shop for laser cutting (metal) or water cutting (marble).

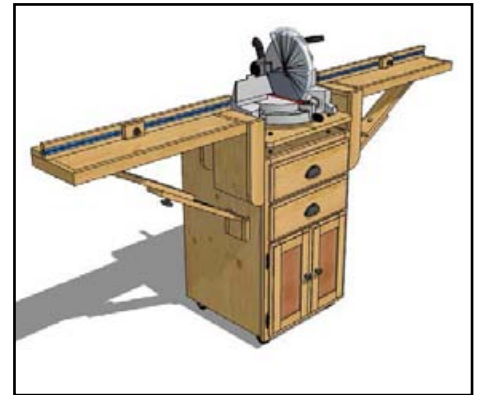
The most well-known 2D drafting programme is AutoCAD. There are many free AutoCAD-like programmes available for home use. Examples include DraftSight, NanoCAD and DoubleCAD. That said, AutoCAD's interface is not easy for beginners to master, so these programmes may be better suited to experienced users. For those who are new to 2D CAD, Solid Edge 2D Drafting may be a better choice. If you need an affordable 2D programme with more advanced tools, consider trying AllyCAD.



2D drafting is ideal for drawings that are flat and you can work with 100% accuracy



This house plan was created using AllyCAD

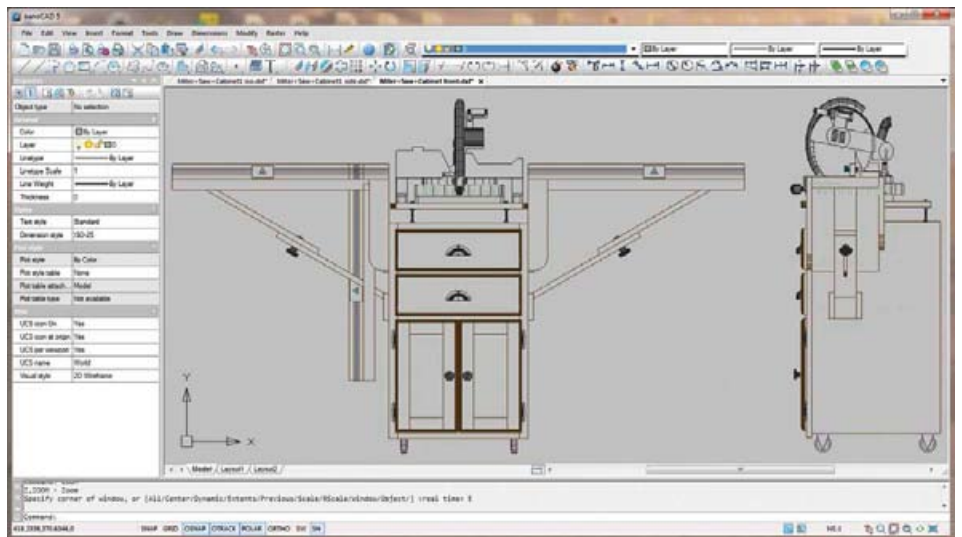


This is the 3D view of the below project – a mitre saw cabinet

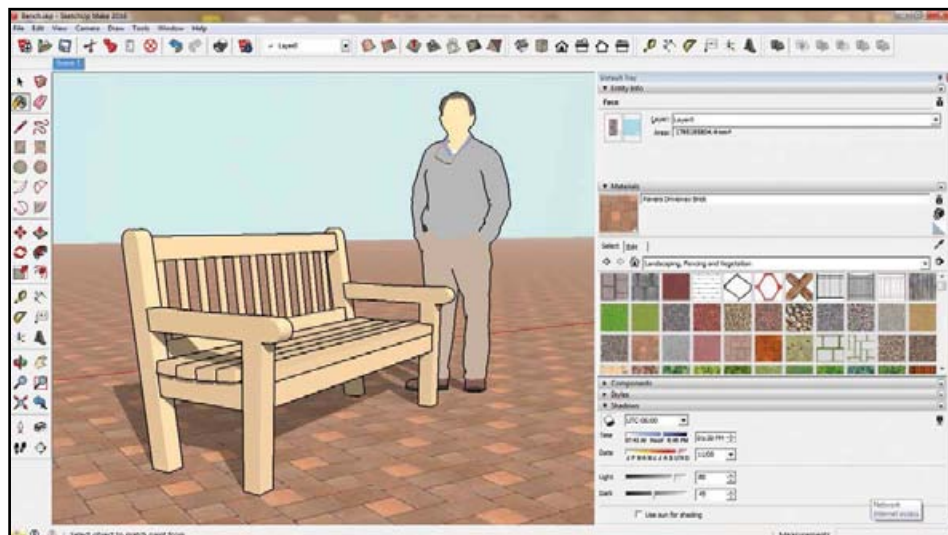
3D drafting

For more complicated projects, 3D drafting is useful. Examples include jungle gyms, speed boat trailers, kitchen cabinets, braais, motorbike stands and folding chairs.

The typical procedure for 3D drafting works as follows: The part you want to draw is first created as a 3D model (this is easier to do than it sounds). The views of your model (including isometric views) are then generated automatically from the 3D model. You can add dimensions and notes to the views as you would with a 2D CAD programme. You can assemble multiple 3D parts together to make assemblies. This is a great way of checking if all your parts will fit together before you make them, for example when toy-making.



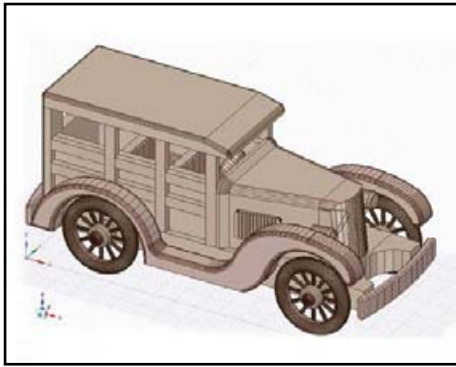
3D drafting makes planning a woodworking project an easy task



SketchUp is probably the most well-known direct modelling program

On top of that you can automatically generate a bill of materials that lists all the parts in your assembly. You can generate sectional views and exploded diagrams from these assemblies too. You can also render images that look almost like photographs of your finished design. This is useful for sharing your ideas with people who can't read technical drawings. For example, you can get input from your wife (or customer) before you go ahead and order the raw materials.

Most modern machine shops can create parts directly from 3D models without the need for 2D drawings. This is useful if you need metal parts but you don't have access to laths and milling machines. You can also send your 3D model to a 3D printer and it



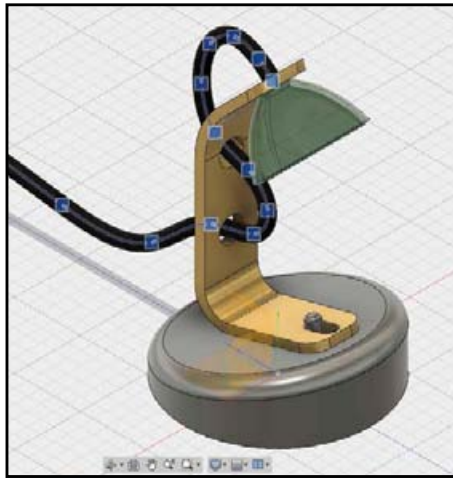
See how all the parts fit together on your next toy-making project with an accurate 3D drawing

will print your model in plastic. There are vendors that can print your models for you if you don't have a 3D printer of your own. CAD House (in Midrand) or Protolink3d (in Cape Town) are two such examples.

Direct versus parametric modelling

With direct modelling, you work directly on the model by clicking and dragging on faces and edges of the part. It is almost as if you were working with playdough. With this method it is easy to make radical changes to a 3D model. Direct modelling programmes tend to be cheaper than parametric programmes. Direct modelling is easier to learn because it is more intuitive than parametric modelling. The disadvantage of this style of modelling is that it tends to be less precise. This may be an issue if you need to make drawings of precision machine parts and assemblies. SketchUp is probably the most well-known direct modelling program. It is a great programme for novice users. More advanced users may prefer to use 123D Design or DesignSpark Mechanical, both of which are free for private use.

With parametric modelling you do not work directly on the model. The model is defined by a table of parameters. You can define your own parameter names, for example: length, width and height etc. If you change the numbers in the table, the model automatically updates. The model is



You can render images of your finished design to see the final result



A word of caution

There are many wonderful free programmes available on the net. Unfortunately, many of them are loaded with adware, spyware and viruses. We recommend that you only download software from the official vendor's website and read the boxes before clicking yes. You may be getting more than you bargained for.

driven by the parameters. This is useful for making new drawings based on standard parts. You can also define how parts in an assembly are connected together. For example, you may constrain a bolt in a hole; if the part with the hole is moved, the bolt would move with the hole. You can test the working of mechanisms too. For example, if you had an assembly of a motor car engine (with all the parts correctly constrained), you could drag the piston up and down with the mouse, and the crank shaft would turn accordingly. Parametric modelling programmes are more useful in a production environment than for once-off parts.

Parametric tends to be expensive and requires more time to learn. One of the frustrations with parametric programs is

that it is not always quick to make changes to a model. You first have to find out which parameter is controlling the feature you wish to change. Most of the high-end 3D modelling programs are parametric. Catia, SolidWorks, Autodesk Inventor and Pro/ENGINEER (now called Creo Parametric) are some of the most famous examples. If you are used to one of these high end programs and want something similar for home use you could try KOMPAS-3D V15 Home (not free), Cubify Design (not free) or Autodesk Fusion 360 (free for hobbyists and small start-ups).

So, direct modelling is better for the conceptual stage of design because it is so easy to make radical changes. Parametric modelling is better at the production stage once the design is close to being finalised.

Saving your drawings

If you need to share your drawings with subcontractors and customers, you will need to choose a programme that saves in a common format. For 2D drawings, AutoCAD's .dwg and .dxf formats have come to be the de facto standard in many industries. For 3D models .dxf, .step and .iges 3D formats are popular. If you plan to do 3D printing, you will need to save in .stl format. You may end up using multiple programmes in order to convert from one format to the other. For example, DesignSpark Mechanical can open SketchUp 3D files and save them in .stl format. 123D Design is a very useful programme for converting between various 3D CAD formats. ✂

See the review of CAD software

To help you choose the right CAD software for you, we have put together a comprehensive review of popular 2D and 3D packages. Go to <http://bit.ly/29xcUQu>



Make a fire

Have you been doing it all wrong?



With this year's winter being a bit nippier than last, many of us have been using our wood-burning fireplaces in an attempt to stay warm. The bad news is that wood smoke is a pollutant and harmful. It contains particulates that damage the lungs as well as poisons. In developing countries, children's health is put at risk by open cooking fires, hence the drive to more efficient reduced smoke cookers.

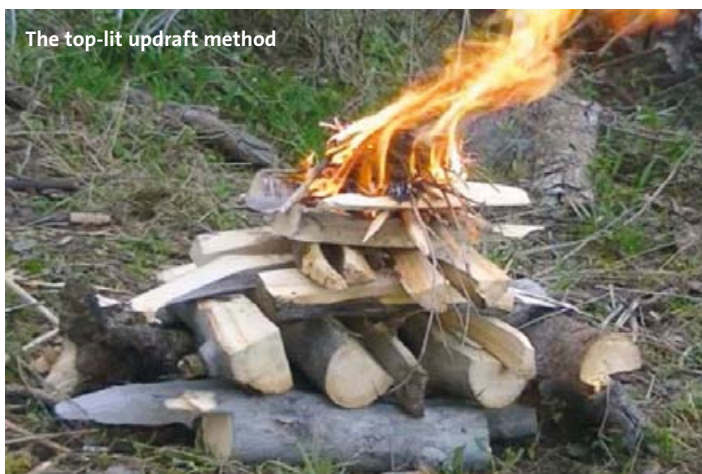
Earth Probiotic CEO Gavin Heron shares a method to reduce the amount of pollutants emitted by burning wood. First, some basic science: When wood is heated, it releases gases. The first to be released is steam

and then the flammable gases, which are visible to us as smoke. Traditionally, we make a fire and light it from the bottom. We start with the smaller pieces and then these light the larger pieces at the top of the fire. "We need to think of a piece of wood as a 'gas canister'. Heat from the

bottom of the fire heats the top pieces and these release gases into the surroundings."

"An alternative is the top-lit updraft (TLUD) method." When using this method, heat from the top of the fire heats the bottom layers and these release gases. "However, instead of rising unencumbered to the atmosphere, the top layer burns away these gases. This equates to less smoke, less pollution and a more efficient process."

So, when you're thinking about lighting a fire, open or enclosed, reverse everything you've learnt and turn it upside down instead. ✕



For more information

Visit: earthprobiotic.co.za
Tel: 011-959-1083

Geyser myths, maintenance and safety

Why proper geyser
maintenance and
assessment saves more
than money

By Gareth Greathead

Geysers are pressurised hot water cylinders and can lose efficiency and even become dangerous if not maintained correctly. There are several built-in protection mechanisms, including a pressure release valve, to release pressure should over pressurisation occur. It's extremely uncommon for all safety mechanisms to fail, but incorrect installation or inadequate maintenance can increase the likelihood of this happening. In the interest of safety, only specialists trained to work on pressurised vessels are permitted to work on hot water cylinders.

Serviceable components

South Africa's water supply is inherently high in lime content, measured in parts per million. This causes lime to build up on the components inside your geyser. Cobra Watertech's national training manager Patrick Gordon says, "Municipalities add chemicals in an attempt to balance the pH but this does not remove the lime content. Having the geyser set above 60°C will also cause lime to build up faster than usual. In Thabazimbi we went to do an assessment on a geyser and found that it was installed according to specification. However, in only three months the internal components had built up a thick deposit of lime, causing problems with the system. Generally speaking, you should get your geyser assessed by a plumber every two years, but geysers in some regions may need to be assessed more regularly."

Self-sacrificing anode

The sacrificial anode may need to be replaced every two years – anode rods are screwed into the inside of geysers and are generally made of a magnesium alloy. This anode, or rod, prevents corrosion inside the

geyser by 'self-sacrificing' its metal, which prevents corrosion and build-up of lime scale. When there's no sacrificial metal left on the anode, components inside the tank will begin to corrode. How often it needs to be replaced will depend on water quality and usage.

Element

Over time, lime will build up on the element, inhibiting the transfer of heat to the water, reducing efficiency and potentially burning out the element as it cannot disperse the heat.

Thermostat

There is also the possibility of the thermostat gathering lime build-up. This will cause the thermostat to take incorrect readings, resulting in the overheating of water inside.

This causes abnormally high temperatures, which could result in purging of water from the safety valve, wasting both water and energy because lost water is replaced with cool water that has to be heated to the set temperature.

Solar geysers

Solar geysers often require more maintenance than element geysers. Check the following components.

Tempering valve

Solar panels and evacuated tubes can heat water to over 100°C. A tempering valve mixes cold water to bring down the temperature before it reaches the thermal point of access.

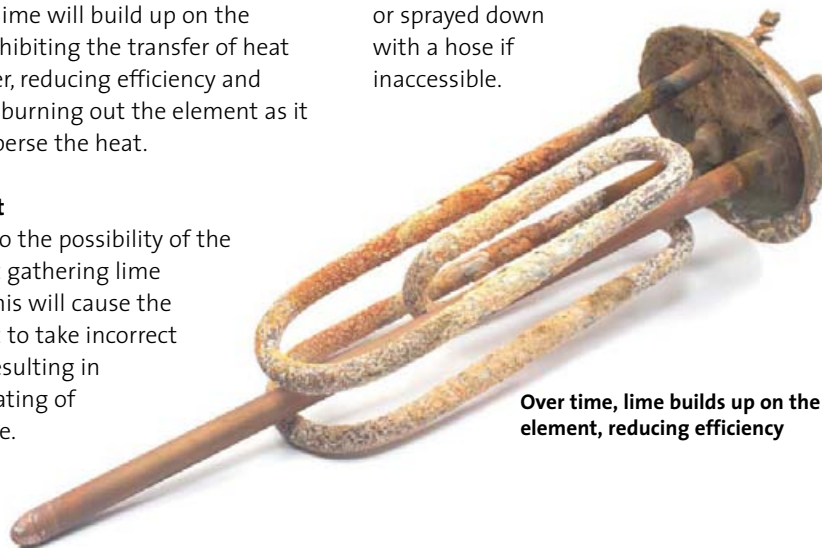
Pumps

Some solar systems (where the geyser is below the panel) need pumps, which may require changing every five years.

Collectors

Dust and dirt on the surface of the collectors will affect the absorption of radiant energy from the sun. Collectors need to be cleaned monthly with dishwashing liquid or sprayed down with a hose if inaccessible.

Over time, lime builds up on the element, reducing efficiency



Solar geysers often require more maintenance than element geysers



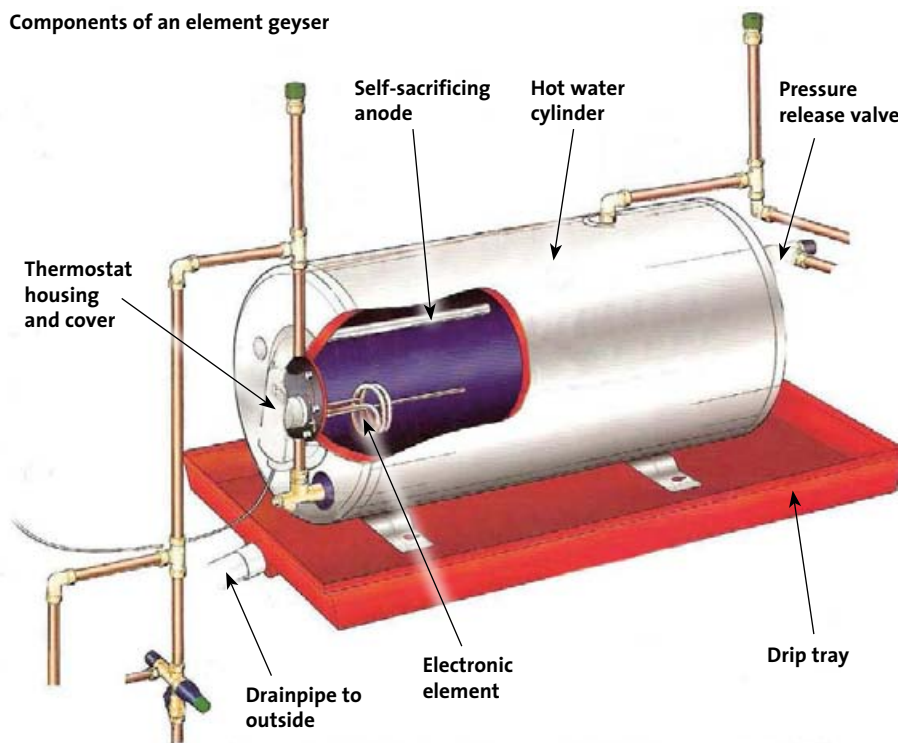
Safety checks

Check that the cover over the thermostat and element is screwed closed as sometimes this is left open after servicing. The cover is there to prevent accidental shock, so remember to turn off the power before replacing missing covers.

Check that the drip tray is positioned correctly under the geyser and is not obstructed so it will safely drain water in the event of a leaking geyser. Get a jug and pour some water into the tray to check that it is carried down the drainpipe.

Geysers need to be installed in a location that can withstand the weight of the tank. A leaking drip tray can affect the structural integrity of the supporting structure. Check that the beams supporting the geyser are sound.

Components of an element geyser



Dispelling myths

Myth 1: Switching off your geyser saves money

The idea that switching off your geyser to save money has several flaws; one being the measurement of related savings. At the same time by, switching off the geyser you do help Eskom reduce load during peak hours. Patrick explains, "It takes X amount of energy to heat 1 litre of water by 1°C. Whether this heating takes place continuously during the day or all at once when the power is turned back on, the energy consumption stays the same, thus no energy saving takes place. The isolator switch is not designed for such repeated use, so if you do want to turn off the geyser at certain times, it is advisable to have a unit fitted that is specially designed for this purpose."

Myth 2: Switching off your geyser damages it

The theory is that the larger temperature variations cause abnormally high levels of expansion and contraction. It is claimed that this may cause the geyser to fail prematurely. In reality, geysers are designed to handle these variations and there should be no problem.

Myth 3: Lower the temperature on your geyser

Patrick says, "The ideal working temperature is 60°C. In fact, a geyser that has its thermostat set too low can have serious health implications and may even cause death." Legionnaires' disease is a form of atypical pneumonia symptoms caused by any type of Legionella bacteria. The bacteria is found naturally in fresh water and can contaminate hot water tanks, hot tubs, cooling towers and large evaporative coolers on air conditioners. Symptoms may include a cough, shortness

of breath, high fever, muscle pains and headaches. Nausea, vomiting and diarrhoea may also occur. These symptoms are usually evident between two and 10 days after exposure.

Many people are not affected by exposure and those who are older, have a history of smoking, chronic lung disease and poor immune systems are most at risk. People who are affected are often hospitalised and receive a regime of antibiotics. Research in the field is not conclusive, but it has been estimated that 5% of the population may be at risk and 10% of those affected die. "Geysers should be set at 60°C. Settings lower than 58°C will not kill the bacteria that acclimates in geysers. Infection is normally caused by breathing in steam containing the bacterial spores in the shower. There was an outbreak in Scotland where a brewery was releasing spores from its towers. Of the 28 people found to be infected, four died."

Increasing efficiency

Possibly the cheapest and easiest way to increase the efficiency of your geyser is to insulate it with a geyser blanket. This will limit the transfer of heat from the hot water tank to the ambient room temperature. You will also need to insulate the hot and cold water pipes to and from the geyser. You can do this yourself if you are careful and follow all the instructions.



Invest a solar geyser to save electricity

The Institute of Plumbing SA (IOPSA) and related industrial bodies have been pushing for legislation requiring the carrying out of a Certificate of Compliance (COC) before the sale of a home. "This legislation has been passed, giving homebuyers greater peace of mind and ensuring their safety. Within this is the requirement for insulation of both hot and cold water pipes," says Patrick. This was initiated to save both water and energy. For example in the summer, if you turn on the cold water, there is a delay before the water becomes cold – reducing this delay saves water. When you turn on the hot water again, you have to wait for the cooler water to be expelled. By insulating the piping carrying hot water you can save both water and energy.

There are DIY pipe insulation kits, but these do not meet the specifications listed in the National Building Regulations and Building Standards Act. Patrick says, "This means that a homeowner will not be issued a COC should they decide to sell. Pipe insulation requires the removal of plumbing and fitment of a fully enclosed sleeve according to specification. That said, some insulation is better than none." ✖



Increase the efficiency of your geyser with a geyser blanket

Gas stove maintenance



With electricity tariffs increasing many people are looking for alternative ways to feed the most energy intensive fixtures in their homes, such as stoves

By Aarifah Nosarka

How a gas stove works

A gas stove consists of a burner assembly attached to a manifold connected to the main gas line. The surface burner knobs on your stove control the burner valves. When you turn a knob, the valve opens, allowing gas to flow from the manifold. Gas travels through burner tubes before entering the burner where it combines with oxygen to create a mixture necessary for combustion.

In units fitted with a flame failure device (FFD), knobs have to be pressed downwards and turned to the first setting, holding the knob depressed for ± 5 seconds to allow the thermocouple (a device for measuring temperature) to heat up and send a signal to the electromagnetic valve to stay open. There is a sparker on one side of the burner that sends a small spark to ignite the oxygen



Note

The explanation of how a gas stove works applies to low pressure cylinders (2.8kPa). For safety reasons all free-standing, slide-in and DIY gas stove installations are low pressure. Low pressure fires can be contained by depriving the fire of oxygen. This is done by throwing a water soaked towel or blanket over the fire.

and gas mixture as it flows through the burner holes. When the knob is turned to a higher heat setting, the flow of gas and air is increased, creating a larger flame.

Purchase and installation

Gas stoves sold in South Africa must comply to and be tested by the National Test House of the South African National Standards for approval. A permit and permit number from the Liquefied Petroleum Gas Safety Association of Southern Africa (LPGSASA) will then be issued. The permit number is displayed on a technical data label found on the body of the appliance.



Did you know?

LPG is a liquid and cylinders can only be filled to 80% liquid LPG of its capacity. The remaining 20% of the volume is for 'boiling off' vapour gas. 'Flash point' of this vapour requires 10% oxygen mixed with LPG vapour to ignite.



Always buy gas from a reputable gas dealer

Alternative cleaning methods

Clean burners by following three simple steps using vinegar or baking soda:

Vinegar

- Step 1:** Fill a spray bottle with white vinegar. Remove burners and spray each burner, coating it with vinegar.
- Step 2:** Leave the vinegar on for about 10 minutes, or longer if necessary.
- Step 3:** Wipe down with a clean cloth.

Baking soda

- Step 1:** Remove the burners and wash them down with soapy water.
- Step 2:** Make a thick paste of baking soda and water. Coat each burner with the paste and leave to stand for about 15 minutes.
- Step 3:** Use a sponge to remove residue and rinse thoroughly.

When looking for a gas stove, select one with a flame failure device (FFD) fitted to each burner. Alex de Clerck, owner of Delta Engineering, says, "This is a safety precaution and is designed to shut off a burner if there is a flame-out." These stoves should be installed by an authorised gas practitioner possessing a valid South African Qualification and Certification Committee (SAQCC) Gas Practitioner registration card.



The most important maintenance is keeping the burners and burner housing clean

Currently, an indoor free-standing unit, without FFD, can be bought and installed, but this is set to change. The gas cylinder is usually no more than 19kg and situated closer to or about 300mm away from the free-standing stove. Alex says that a revised SANS 1539 will be out soon and free-standing stoves without FFD will no longer be allowed in South Africa.

Advice

Always buy gas from a reputable gas dealer. Alex warns against rogue illegal fillers. "These cylinders are filled illegally and do not get their required inspections and purging to remove the heavy residue inside." He says that these cylinders contain dirty gas and give off a strong combustion smell, damaging the regulator and clogging the jets. There should be a branded plastic seal covering the cylinder valve. Cylinders with a clear, unmarked seal or without a seal indicates illegal filling.

Grease/oil inside burner housings can present a fire hazard and require regular cleaning

Maintenance

Gas appliances don't need a lot of maintenance. The reinforced pipe connection to the gas cylinder is referred to as the pigtail. When changing cylinders, check that there are no cracks along the pipe (pigtail). By law it is required that pigtails be replaced every five years. Pipes exposed to direct sunlight will have a shorter life span. Also check the nose cone sealing washer on the pigtail for deformation and cracks. Replace if necessary as it can cause a high pressure leak, which is very dangerous.

"The most important maintenance is keeping the burners and the burner housing clean." According to Alex, burners become dirty when appliances spill liquids that end up settling in the burners' housing. Greasy burners affect your cooking, age your appliance and present a fire hazard.

Alex recommends cleaning with a tough kitchen degreasing liquid and non-abrasive scouring pad for hard burnt-in residue.

If necessary remove the control knobs and wash them in warm, soapy water



Warning

The main gas jets that supply the fuel to the ignition system reside underneath the burners. Exercise caution when cleaning, as there should be no liquid entering the gas stove jets.

Signs that a jet is blocked

An unequal or yellow-burning flame is an indication of a blocked jet. Burner flames should be almost completely blue with a small hint of yellow in the centre of the flame. Alex warns against attempts to unblock a jet using a sharp object. "This can increase the jet size and cause a yellow flame." Instead he recommends replacement of the jet.

Tips for cleaning surfaces and pot holders

Different surfaces require different cleaning methods. "Always refer to the manufacturer's instruction manual before using your appliance." Here are some guidelines:

- Use a soft cloth and dishwashing liquid.
- Avoid using abrasive cleaners or harsh scouring pads; they will scratch the surface and can wipe off the setting allocations on your stove. A useful tip is to polish the stainless steel model's surface with baby oil to keep it nice and shiny.
- Clean grid build-up from the flame failure thermostat. This can be found next to each burner on the stove.
- Clean the auto ignition situated next to the thermostat on the side of the burner. Be careful not to break the ceramic insulation.



Burner flames should be almost completely blue. A yellow-burning flame is an indication of a blocked jet

Before removing or replacing jets, unplug the stove from the wall outlet if it has an electrical cord. Locate the gas valve inlet behind the stove and shut it off to prevent gas flowing into the stove while you work on it.

"Immerse the jet in clear vinegar. Leave it overnight. Blow it clean and replace it on the stove. Do not over tighten the jet as this can strip if you apply excessive force."

When the jet is replaced, replace the burner housing and burner cap in the correct position. It helps to note how it was



Gas stoves sold in South Africa must comply to and be tested by the National Test House of the South African National Standards for approval

positioned before you removed it or, better yet, refer to the manufacturer's instruction manual for the correct fitment. "Failing to do this can result in either failure to get ignition on the burner, or a yellow flame."

Some gas stove tops have sealed burners, and these burners are not meant to be removed. A stove top with a sealed burner means spillage does not enter the burner box, so it is not necessary to remove burners. This is a job for professionals during installation and service.

Control knobs

If necessary, remove the control knobs and wash them in warm, soapy water. Replace the knobs after cleaning and turn each one briefly to ensure it has been correctly replaced.

Flame settings

There are flame settings on valve controls of most reputable gas stove brands. Normally the gas practitioner adjusts this setting in the presence of the client, according to client requirements. "Settings can be carried out by the owner but, because the methods of setting valve controls differ, I recommended that the

manufacturer's instruction manual be read and adhered to in order to set it accordingly."

How to check for leaks

Use a spray bottle with a 50/50 solution of water and liquid soap. Spray the liquid on all gas connections and joints. Bubbles will be noticed around areas that are leaking. It is imperative to call a technician to fix the leak.

Gas stove owners are not allowed to work on the gas line. If there is a leak or you smell gas, take the following precautions:

- Turn off the gas immediately at the cylinder and then at the secondary valve located near the stove. Avoid touching the stove valves in case of possible ignition.
- Do not smoke, strike matches or operate electrical switches or devices.
- An indoor leak necessitates ventilation. Open all doors and windows if it is safe to do so.
- Stay away from the affected area until the gas dissipates.
- Contact your gas fitter or installer to inspect the appliance.

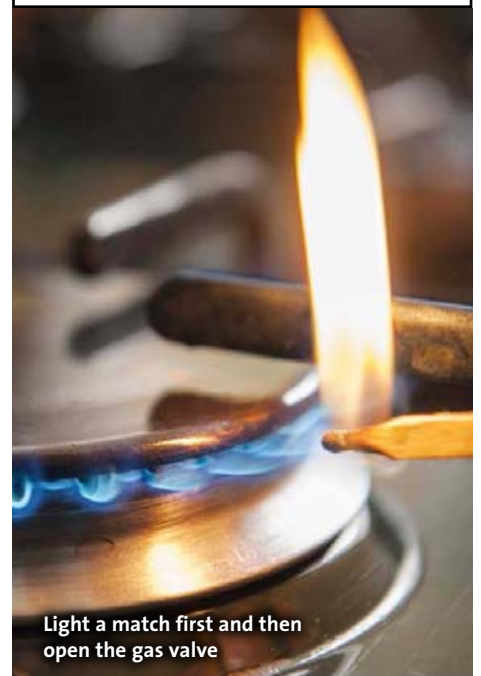
Always...

- Choose a reputable retailer to purchase appliances.
- Choose a specialised gas retailer with competent personnel to assist.
- Source companies that have reasonable repair turnover times.
- Opt for brands that support their product with repairs in a minimum timeframe and back up their service with integrity.

Safety advice

Egoli Gas shares some suggestions on using gas safely:

- Use the correct ignition procedures. Do not use paper to light the stove.
- Flame first, then open the gas valve.
- Turn pot handles away from the stove edge.
- Wear tight-fitting sleeves when cooking.
- Do not store oil or any flammable or combustible materials under, above or next to the stove or grill.
- Do not use cooking appliances as heaters. ✖



Light a match first and then open the gas valve

BRIGHT IDEAS

Readers share their time-saving, space-saving or innovative ideas

How to make bird feeder in no time

Step-by-step guide

Step 1: Cut a rebate into the rear of the base to accommodate the perch support 105mm in from one of the back edges and 70mm long, 20mm deep.

Step 2: Round off the top edge of the perch support.

Step 3: Drill one 16mm hole 100mm up from the bottom of the perch support to accommodate the lower perch.

Step 4: Drill two 6mm holes side by side and 170mm up from the bottom of the perch support for the fruit retainers. Countersink both holes.

Step 5: Glue and screw the perch support in the rebate.

Step 6: Glue the 16mm dowel rod for the perch into its hole, making sure it is flush with the rear.

Step 7: Slightly sharpen the 6mm dowels for the fruit retainers to make it easier to pierce fruit. Glue these in place.

Step 8: Sand as many pieces before assembly, with final sanding after assembly.

Step 9: Glue all the frame pieces to surround the base.

Step 10: Apply at least three coats of sealant, clear varnish or paint.

Fix the bird feeder to a garden wall as far from your house as possible. Cut an apple or orange in half and pierce it on the sharpened fruit retainer dowels. Birdseed can be poured onto the table. Sit back and watch – the birds will arrive in no time!

Eugene Taljaard



Cutting list

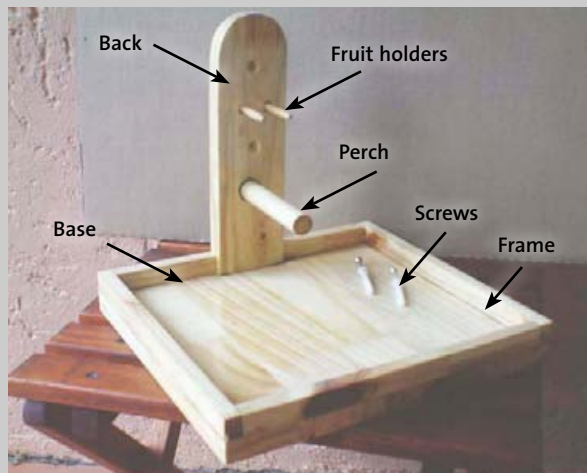
Pine plywood:

- One 300mm x 280mm x 20mm piece for the base
- One 260mm x 70mm x 20mm piece for the perch support
- Two 300mm x 280mm x 20mm for the frame sides
- One piece 270mm x 20mm x 15mm for the frame front
- Two 90mm x 20mm x 15mm for the frame back
- One 16mm diameter dowel 125mm long
- Two 6mm diameter dowels 125mm long



Tools & materials

- Waterproof wood glue
- Sandpaper
- Drill bits
- Electric saw



WINNING LETTER



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Please note: Winners' prizes may take up to six weeks for delivery. The prize sponsor sends out the prizes. Prizes are not exchangeable.

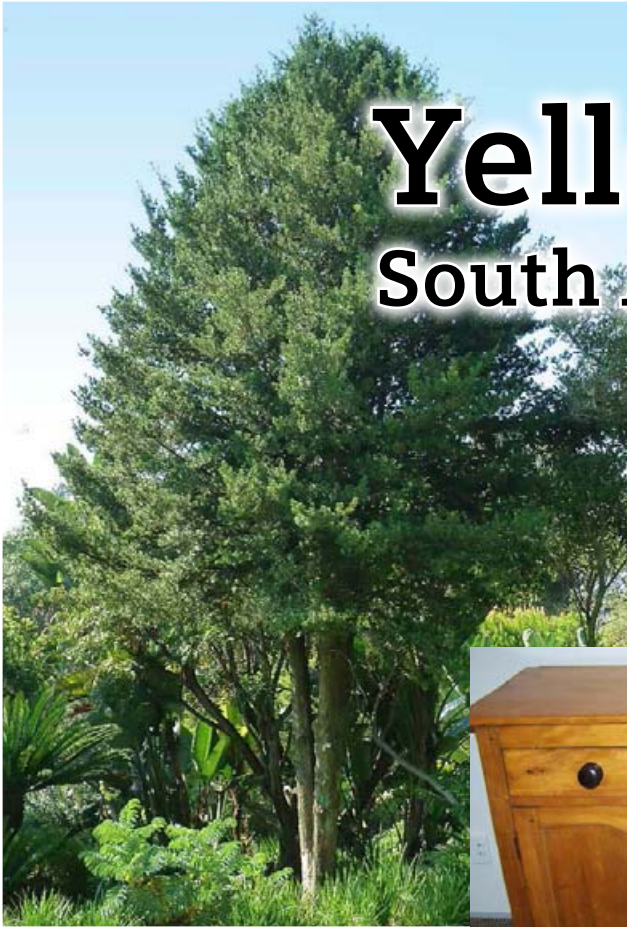


Yellowwood:

South Africa's national tree

The yellowwood is a rare, slow-growing tree that has been used more than any other South African timber

By Aarifah Nosarka



Old yellowwood sideboard

The yellowwood tree (*Podocarpus latifolius*), also commonly known in Afrikaans as *opregte-geelhout*, was once an abundant and much sought after resource. As a result, it almost became extinct in certain areas. Today, yellowwood trees are protected under the National Forests Act No. 84 of 1998. The rarity of this wood has contributed to the high price that yellowwood furniture commands.

The yellowwood family, *Podocarpaceae*, has been in South Africa for more than 100 million years. These trees are indigenous to the moister southern and eastern regions of the country and can be found around coastal areas in the Western Cape, KwaZulu-Natal and eastern Limpopo. Stephanie Dyer from Timber Information Services SA says, "Four indigenous yellowwood species are found in South Africa, namely Outeniqua yellowwood (*Afrocarpus falcatus*), real

yellowwood (*Podocarpus latifolius*), Breede River yellowwood (*P. elongatus*) and Henkel's yellowwood (*P. henkelii*). The former two species produce most of the yellowwood used in South Africa."

Description

The real yellowwood is an evergreen tree growing to between 20-30m tall, however, in forests, it is able to extend to 40m high. The base of the trunk can also reach 3m in diameter. In contrast, trees that grow in unsheltered places such as mountain slopes are often short, bushy and gnarled. Under harsh conditions yellowwood trees do not grow to more than 2m, although they appear older and have character.

The leaves are glossy green, long and narrow. Leaves on young trees are larger than leaves

on mature trees. New leaves form clusters of bronze and pale green at the ends of branches, which stand out in comparison to the older, dark green leaves. The wood is yellow, while the bark has a smooth greyish undertone or khaki colour that shows off characteristic longitudinal fissures as it matures. The tree's bark peels off in strips.

Uses

The real yellowwood was excessively used for furniture pieces such as tables and cupboards. South African Railways previously used yellowwood timber to make railway sleepers and it was also utilised for wagon boxes and coffins. Stephanie says, "Yellowwood was a popular timber for flooring in early Cape homesteads. It is still used to make furniture, joinery, fittings, decorative veneers and panelling, but this is limited to recycled wood and wood harvested under control of the National Forests Act."

Properties

The timber has a medium bending and crushing strength with very low stiffness and low resistance to shock loads. It is easy to work with when using either hand or machine tools. Using glue and nails on the wood is classified as satisfactory, but pre-boring is recommended in nailing, especially close to ends of components. It is also easy to polish and paint. ✖



Make a kitchen shelf

Custom-built shelving can help you build shelves around a particular challenge. *Clifford Roberts and Andries Eygelaar* show you how to get around drywalling

We recently added a room on top of our garage complete with plumbing for a small kitchen. As space was limited for cupboards, we decided to design, make and install a shelf to solve the problem.

The shelf includes space to hang coffee mugs and a series of dowels where plates can be slotted in for vertical storage rather than traditional stacking. One challenge that singled out this project from regular installations is that the shelf needed to be attached to a drywall.

Commonly, drywalls consist of shutterboard panels mounted on a timber or metal frame. Heavier objects cannot be hung on the drywall itself and it is necessary to locate the frame behind the wall. We had to ensure our shelf could bear the weight of crockery and a few pots and pans. This had to be done before making the

shelf as the supports on the shelf needed to line up with the timber frame inside the drywall.

Timber uprights in drywalling are generally erected/spaced 400mm apart, which gave us a clue about where each was located behind the panels. From there we



Cutting list

- Two MDF (Supawood) planks: 2.7m x 210mm x 16mm for the shelves
- Five 315mm x 210mm x 16mm pieces for the sides and partitions
- Twenty-two 10mm dowels: 315mm in length
- Hardboard (Masonite): 2.7m x 315mm x 4mm
- Four strips of pine: 480mm x 25mm x 15mm for the dowel brackets
- Four 90mm x 15mm x 15mm pieces of wood for mounting blocks



Tools

- Drill and bits
- Jigsaw
- Saw, ideally electric
- Pencil and square ruler
- Tape measure
- G-clamps
- 38 chipboard screws, 18 regular screws
- Wood filler paste
- 12 shelf studs
- 20 wire nails (25mm long)
- Cold wood glue



1

Screw the partitions into place, continuously checking your measurements



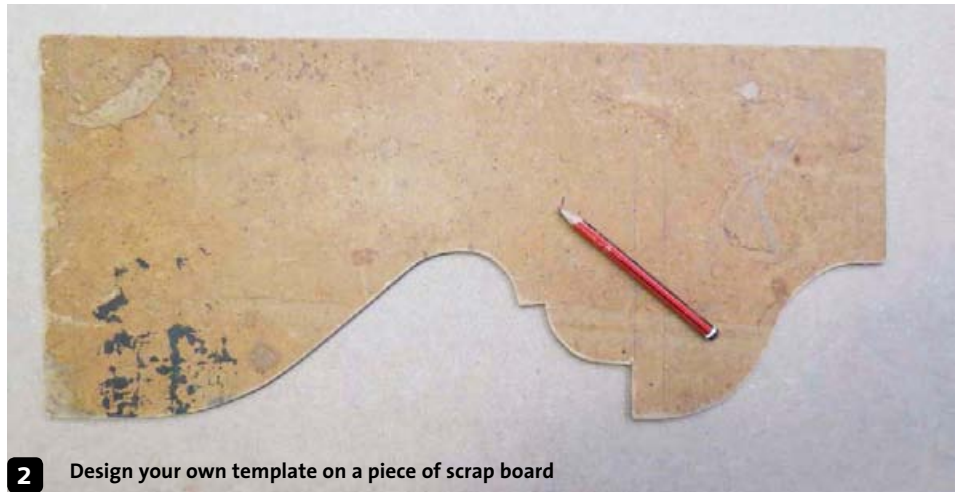
Note

For small apartments and home additions, nail-together shop-bought kits don't always fit the available space

rapped our knuckles near these spots and listened for a muted sound to confirm the approximate location of the uprights.

To find the exact location we needed to conduct some exploratory drilling. At the approximate height of the shelf and using a thin, wood drill bit, we made a hole in the wall where the shelf would start. If you feel resistance on the drill and find wood shavings on the bit when you withdraw, you've located the frame. If not, keep drilling holes in small increments and avoid drilling near electrical and plumbing pipes. If the drill catches the thermal insulation inside the walls, release the bit from the drill and use pliers to untwist it.

Once you've located enough mounting points, mark them and use Polyfilla or, better yet, a flexible acrylic filler to plug the holes you won't be using. Our shelf measured 2 660mm in length and we were able to locate four usable uprights.



2

Design your own template on a piece of scrap board



3

Once your design has been transposed to the wood, use a jigsaw to cut it out

Project guide



Difficulty: Beginner



Estimated cost: ±R550



Estimated time: Two days

The mounting of our shelf relied on utilising the area below the shelf, which is tiled. We positioned our shelf in a place that allowed us to take advantage of the extra support and have the back edge rest on the protruding lip of the uppermost tile. You may have something else to rest the shelf on and this adds further support without having to rely solely on the uprights behind the wall.

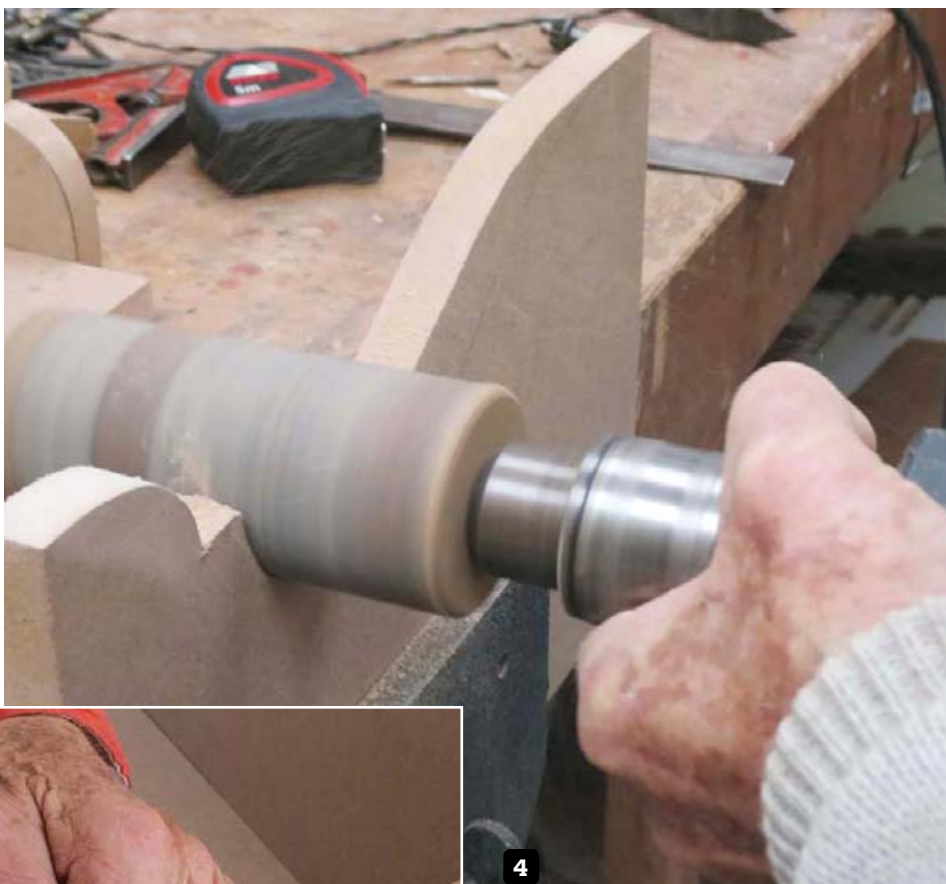
Step-by-step guide

Step 1: Lay out the boards listed in your cutting list and visualise the final construction. You'll have two long MDF boards for the top and bottom; one long piece of hardboard for the back; five pieces of MDF for the partitions and ends; three planks for the shelves; and 22 dowels. The four strips of 480mm x 25mm x 15mm will hold the dowels in place.

Step 2: In our design, we created an ornamental cutting template for the five partitions and ends. Then, using a jigsaw, we cut the partitions according to the template, ensuring each one was exactly the same as the others.

Step 3: Identify where your partitions will be fixed and mark them on the bottom and top planks. Our design meant that the partitions were not spaced equally. Note that the cutting list above follows our design. Should you choose a different design, make sure the measurements all add up to the length of the shelf. The partitions in our design measured from left 690mm, 480mm (for the dowel segment), 710mm and 690mm.

Step 4: The partition for the dowels comprises two rows of 11 dowels in parallel, which means it will accommodate 12 plates. Before screwing your four dowel brackets in place, plot where each dowel will sit. Use a 10mm bit and drill a hole through the bracket at each location. Now, using a screw at each end of each support, fix them to the shelf, about 3mm from the front and


4

A spindle sander comes in handy to neaten up any rough edges


5

Always check your angles

back edge. Should any of the dowels break long after installation, you can replace them simply by unscrewing and sliding out the supports.

Step 5: With the shelf assembly facing up, drill pilot holes into the top and bottom planks of MDF where the partitions will be located. Slip the dowels into the brackets and then, using G-clamps and wood glue

to hold the assembly in place, screw the partitions and shelf ends in place. They should be flush at the back of the shelf.

Step 6: Plot the location of the shelf studs to hold the dividers inside the partitions, ensuring they're level. Ours required us to drill a small hole to be able to attach each stud. Attach the backing board with the wire nails. Now, transpose the location of


6

We used strips of SA pine to hold our dowels in place. Use a 10mm bit to make each hole

the drywall's timber uprights onto the back of the shelf. The whole construction will eventually be fixed to the wall via wooden blocks attached at this point with two screws being drilled into the top of the shelf. We used four blocks, measuring 90mm x 15mm x 15mm. Also mark the location of uprights on the exposed part of the backing board – this will help when you add a few supporting screws once the shelf is up.

Step 7: Use wood filler to neaten off exposed screw heads and paint the shelving as required. Very importantly, before hanging it up, consider whether your shelf will support the weight it is likely to carry. When you're satisfied, use one screw through each of the four blocks to attach the shelf to the uprights. Make sure all the weight is carried on sturdy points like the tiles and uprights rather than the backing board. Now, all that remains is to stock the shelf. ✂



Fix the dowels in place with two screws in each support

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Dining room table made
from beech and karri wood

Making old wood new

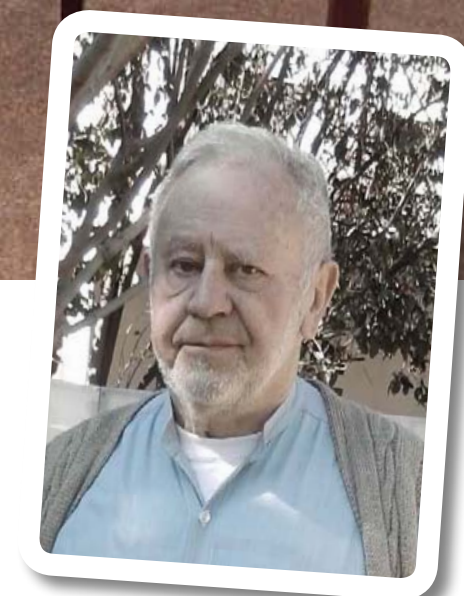
Chairman of the Witwatersrand Woodworking Association and seasoned woodworker Clive Stacey talks wood

By Gareth Greathead

Clive's interest in woodworking started in 1952, but he has an earlier picture of himself 'painting' with his dad, so handyman training started early on. He went attended Durban Preparatory High School, where his woodworking tutor Mr Wilkinson (Wilkie for short) was a significant catalyst for his continued enthusiasm for working with wood. "I continued woodworking at boarding school and also attended classes at the Durban Technical College. I was given my first stationary power tool at about the age of 13 and I still have it – it is in working condition!"

Clive is primarily a cabinetmaker and has used his skills to make practical items needed in his home. "Over the years I have made chairs, tables, desks, bookcases and rebuilt my kitchen twice. Hobbyists tend to be one-off people, so I hardly ever make the same thing twice. Once I have made something, it is time to make something else with new challenges, where I can develop my skills further."

Clive has a noteworthy stockpile of timber, a lot of which has been recovered from all over the country. The great thing about using recovered timber is that often rare



timbers are brought back to life and there is a story to tell. Clive says that some of the wood he has was obtained from deceased estates, but there have been some interesting finds outside of that. "At one time, our property in Parktown North was bordered on one side by a wooden fence made from karri. The fence was erected by the mine, where our neighbour was an executive and where the wood was intended for some other purpose! Karri is a dense hardwood from Australia and I used it for many projects. I still have some left over."

What wood is best?

Many woodworkers are conservationists, collectors, lovers and protectors of wood. Many woods are toxic in varying degrees and sometimes a person's choice of wood is influenced by this. Generally speaking, hard woods are preferred because they respond favourably to machining. "I consider myself as much a collector of wood species as I am a woodworker. Teak stands out for me; it produces a beautiful aroma when milled and it doesn't make me sneeze, cough or itch. In my opinion, kiaat is another of the most pleasant woods to work with. The only wood that I would avoid working with again is hard maple."

Some woodworkers scoff at veneers but this technique has been used for centuries and, while the materials have changed, the technique has not. "I believe every wood has a purpose – even chipboard. In the past, the backing wood (substrate for veneers) may have been pine or even oak but man-made chipboard is stable, which reduces the potential of movement once the veneer has been applied.

The only real difference is possibly the resilience of the old veneers when compared to those used today, which are thinner because new technology enabled veneers of 2mm to 3mm thick to be produced." The use of veneers is even more relevant as fine solid timbers are expensive and difficult to source.

Working with wood

Wood never stops moving and this creates challenges of its own. The nature of wood is perplexing sometimes, "You get hard wood that is soft (like balsa), soft wood that is hard and these characteristics don't necessarily have any relation to the workability of the material. Seasoning of wood is one of the hardest-learned lessons of woodworking. Once 'dry', seasoned, stable timber can still twist, bend and shrink, especially when the hardened outer 'shell' is milled for precise dimensioning. "This means that you have to cater for potential changes in size that may occur. When I

draw up a set of plans, the dimensions of the wood to be milled is oversized by 10% and later 2 or 3% to compensate for possible shrinkage that occurs as the wood acclimatises in the workshop over the following few months. This means that I may plane a piece of timber several times before beginning with assembly."

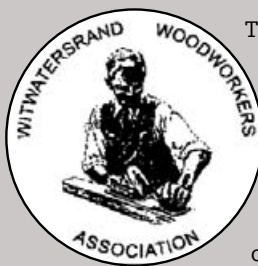
Clive says that knowing how to read and understand grain patterns in wood is vital to successful machining. "The grains may start at one point and travels through the length of wood it may change direction. This can cause pitting and tear-out and you end with chips of wood being torn away from the wood being machined. Overcoming these challenges often requires the use of hand planes and the preparation is a skill that takes time to perfect."



Kiaat desk and matching bookcases

Clive concludes: "Woodworking can be noisy, dusty, solitary and dangerous; but with that comes the reward of satisfaction and fulfilment. Like many others in the hobby, when I'm in my workshop, the world could stop turning and it is likely I wouldn't notice." ✂

The Witwatersrand Woodworking Association (WWA)



There have been some changes at the association recently and these have been implemented to attract new members to the club. The association has added the tagline 'Home of woodworking hobbyists' to signify the atmosphere of sharing that members have with one another.

WWA is the only association in South Africa that has a fully operational woodworking workshop, and it is going largely unused by the people for whom it is intended to cater. One of the inhibitors newcomers face is the high cost of entry to the hobby. Another is smaller properties where people just don't have the space to house enough tools and noise and dust may disturb neighbours. Membership to the Association costs only R400 per year and there are workshops held at the Albertskroon workshop almost weekly.

WWA August 2016 schedule:

- **1 August:** Butch Smuts is doing a presentation on the harvesting, preparation and use of burls in woodworking. There will also be burl, pen and peppermill blanks for sale. The wood of the month is blue gum and members will discuss interesting facts, properties and uses for this wood.
- **6 August:** A discussion of the sharpening and setting of hand saws by Trevor Pope.
- **10 August:** A show and tell on a chest of drawers and a completed furniture restoration project.



For more information

Visit: www.wwa.org.za
Tel: 079-895-8709

Chisels in woodworking

How different shape and style chisels are suited for different applications

By Gareth Greathead

Chisels are used for everything from carving and turning of shapes to joinery. Nothing can beat the peace and tranquillity that comes with the use of hand tools and the satisfaction of making fine cabinetry solely by hand. Today, chisels are used primarily by the turner, but every woodworker will find a place to use this tool when power tools aren't suited.

Chisels must be handled with care and stored in a safe location. Many chisels are made from tempered steel, which will chip with sudden impact. As with all woodworking tools, a sharp edge is pivotal to good results. Woodworking chisels range from small hand tools for tiny details to

Wood chisels are used primarily by woodturners



large chisels used to remove big sections of wood in 'roughing out' the shape of a pattern or design. Typically, in woodcarving, one starts with a larger tool and gradually progresses to smaller tools to finish the detail.

Metals used

The difference between tool steel and high-speed steel (HSS) in turning chisels is important. Either metal can take a relatively sharp cutting edge, though most experienced turners think HSS is capable of achieving a more refined cutting edge. However, HSS enjoys a marked advantage because it retains a sharp edge much longer than tool steel. Both metals require accurate grinding and honing to produce a good cutting edge.

Tool steel is far more sensitive to heat than HSS, requiring extreme caution when grinding or sharpening. Overheat tool steel and the tempering can be altered enough to further reduce its ability to hold a sharp edge. There is also an important difference in the thickness of metal used to make similar chisels. The thicker HSS is more rigid, a virtue in turning chisels that helps minimise flex and vibration when turning, both of which contribute to rough surfaces and catches.



Some of the chisels used for carving wood

Some basic designs

Bevelled edge bench chisels

Not too short and not too long, these chisels are the most common and most versatile chisel in a cabinet shop. The most important criteria are that they should be comfortable in the hand, hold a good edge and be easy to sharpen. The backs of the chisel may be flat or slightly hollow for ease of sharpening. The bevelled sides allow for maximum access to dovetails. They are the most important first set of chisels for any woodworker, with the widest array of sizes available.

Japanese bench chisels

Similar in size to Western bench chisels, these are of laminated steel construction and are in general thicker than their Western counterparts. The major difference is that Japanese bench chisels come from a framing tradition and usually have less of a bevelling on the sides. The edges are harder than Western chisels and Japanese chisels are designed to take a very keen edge for cutting softwoods without crumbling, and to resist the natural abrasion of tropical exotic woods.

Mortise chisels

In the classic tradition of mortising, a chisel is malleted into the wood and then levered out to remove waste. Bench chisels don't have the thickness to withstand the levering out, nor the stout blade angle to resist abuse, nor adequate length to put leverage behind the levering out. No matter the quality of bench chisel, it would soon be destroyed when used for fine joinery.

Sash mortise chisels

These are light mortising chisels that are easy to handle and were originally used for chopping relatively shallow mortises. If you consistently drill out the waste when mortising, these chisels will work well even for deep mortises.

Heavy-duty sash mortise chisels

These chisels are a heavier version of the sash mortise chisel. They are more general-purpose and will get the job done.

Specialist woodworking chisels

- Butt chisels are short chisels with bevelled sides and a straight edge for creating joints.
- Carving chisels are used for intricate designs and sculpting; cutting edges are many, such as gouge, skew, parting, straight, paring and V-groove.
- Corner chisels resemble a punch and have an L-shaped cutting edge. They clean out square holes, mortises and corners with 90° angles.
- Flooring chisels cut and lift flooring materials for removal and repair; ideal for tongue-and-groove flooring.
- Framing chisels are usually used with a mallet, similar to a butt chisel, except they have a longer, slightly flexible blade.
- Slick chisels are a large chisels driven by manual pressure.
- Skew chisels have a 60° cutting angle and are used for trimming and finishing.
- Dovetail chisels are made specifically for cutting dovetail joints. The difference is the thickness of the body of the chisel, as well as the angle of the edges, permitting easier access to the joint.

The round handles and square chisel section make them less comfortable to use, but these features also make them less expensive to manufacture.

Paring chisels

Paring chisels are light, long, thin, almost flexible chisels that are never malleted. They are used primarily for carefully shaving off thin amounts of wood when fitting joints. The long length gives maximum control. One hand on the handle pushes the chisel forward while the other hand, up front on the blade, guides the cutting action. A classic use is to dress the sides of a mortise after roughly chopping it square with a mortise chisel – very handy to have if you do a lot of joinery. ✕

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Project guide

Difficulty: Intermediate



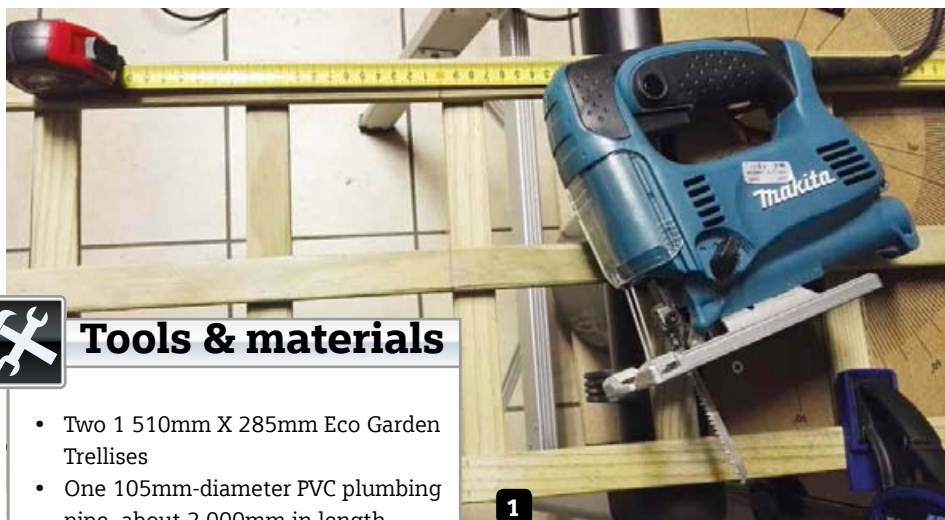
Estimated cost: ±R500



Estimated time: Six hours

Make a trendy wine rack

Lady DIY'er *Elle Franco* demonstrates how to make a wine rack from PVC and trellis that will fit neatly in a narrow space



Tools & materials

- Two 1 510mm X 285mm Eco Garden Trellises
- One 105mm-diameter PVC plumbing pipe, about 2 000mm in length
- Tape measure and pencil
- Medium grit sandpaper
- Jigsaw
- Hacksaw
- Cordless drill with 5mm drill bit for wood
- Wood stain/varnish
- One copper colour spray-paint
- Newspaper or a drop sheet
- Paintbrush
- Machine screws and nuts (5 x 20mm)
- Small nails and a hammer
- Spreader clamps

Wine racks are a popular DIY project and this one that I designed myself makes use of unusual household materials. When coming up with this project, I wanted to make use of copper spray-paint. It is all the rage in the DIY world at the moment and I personally can't get enough of it. Copper goes well with so many themes, colours and materials, and my plan was to pair it with a dark, rich wood, which is where the inexpensive garden trellis comes in.

This DIY project can be adjusted according to the amount of wine bottles you would like to store in your kitchen. Mine stores seven wine bottles and is made to fit in a space next to a fridge. I bought all the materials and tools from Builders – the wooden trellises can be found in the garden section.

1

Work out how high you want your wine rack to be and cut the trellis to size



2

Measure, mark and cut the sections of pipe to 280mm

Step-by-step guide

Step 1: Measure

The first thing you need to do is measure. Work out how tall you want your wine rack to be and calculate how many 105mm-diameter PVC pipes will fit into that length. My rack needed to be 900mm in height (seven PVC pipes or wine bottles). The width is slightly more than the diameter of the PVC.



Tip

The garden trellis is made of rows of blocks. Make sure the height you decide on ends at a square at the top.

Each trellis is 285mm wide, which is convenient since the average wine bottle is 310mm long. You want some of the bottle neck to stick out for easier access, so each length of PVC must be cut to 280mm.

Step 2: Cutting the wooden trellis

Secure your trellis to your workstation with spreader clamps, leaving enough space to cut along the pencil lines with a jigsaw. Make sure your jigsaw is secure and loaded with the correct blade, and that you have safety goggles and gloves on before cutting. The two trellises are going to act as the side casing to hold the PVC pipes being stacked one on top of the other. Remember to keep your offcuts for later.

Step 3: Cutting the PVC pipe

You will need a hacksaw to cut through the larger diameter PVC piping. Measure and make marks at 280mm increments along the length of the pipe. Grab your hacksaw and in a sturdy, forward and backward motion cut through the PVC pipe at the markings you made. Once you have cut all the PVC pipe sections, be sure to smooth the cut edges with some medium grit sandpaper.



3

Spray the sections of pipe



Tip

It can be difficult to cut PVC pipe straight with a hacksaw. I used a mitre box to guide my strokes. You can also wrap a tape measure around the pipe and make dots around the circumference of the pipe.

Step 4: Painting

It's time to add some colour to your PVC pipe sections and stain the wooden trellises. A paintbrush and a dark wood sealer were used to coat the garden trellises, and metallic copper colour spray-paint was used for the PVC pipes.

Grab a drop sheet or some newspaper and cover the surface/floor you will be working on. Cover the garden trellises with one coat, back and front, set aside and allow to fully dry.

Note: Make sure the space you use for the spray-painting is well ventilated. You can wear a mask to prevent inhalation of fumes. Hold the spray-paint can 30cm away from the PVC pipe sections and with light horizontal and vertical strokes apply a thin layer of colour. Allow to fully dry before applying the next coat. The PVC piping will need at least three coats of spray-paint for the copper to really shine. Remember to spray the inside of the PVC pipe too. One can of spray-paint was used to cover the seven 280mm PVC pipe sections inside and out. Don't worry if the off-white colour of the PVC shows through the copper paint – if the spray-paint job is a bit off in some places and the can has run out, this just adds an aged look to the pipes.

Step 5: Assemble

Once your copper-coloured PVC pipe sections and trellises are fully dried, you can start to assemble the rack. Lay the trellis down on the floor – remember the raised wooden ribs on the trellis must face inwards, allowing for the flush sides of the wooden trellis to be on the outside of the rack (see the images).



4 Spray the machine screws and nuts



Tip

The black markings on the off-white PVC plumbing pipe can be difficult to cover. To prevent the black from showing through, you can use some fine grit sandpaper to remove black writing, barcodes and branding markings on the pipe.



5 Stain and varnish the trellis



6 Line up the sections of pipe with the trellis and drill holes



7
Secure the pipes in place using the machine screws and nuts



Tip

A wooden drill bit is best for drilling into plastic or PVC material.

Grab your power drill, 5mm wood drill bit and a pack of machine screws and nuts (5 x 20mm in length). Next, drill a hole in the centre of each holder/level, right the way down the length of the middle spine of each trellis. Then place the 28cm PVC section in-between each grid section of the trellis and continue to find the centre of the PVC section and drill a hole through one side.



Tip

Make sure the ends of the trellises are lying against something flush and straight so that they are lined up straight when securing the two sides – you don't want a Leaning Tower of Pisa as a wine rack.

Line up the drilled hole made in the wooden trellis and the hole in the PVC pipe section and secure with a machine screw and nut on the inside. Add washers if you like and tighten the nut with a wrench. Do this to all the PVC sections attaching a trellis to both sides.



8
Use the offcuts to frame the top and bottom of the rack



9
Nails can be used to secure the top and bottom frames

Step 6: Finishing touches

Remember your offcuts? You can now cut them to size to create a top and bottom for the rack. With a trellis attached to each side of the rack of PVC pipes the width of the rack came to 130mm. Measure the gap in-between and cut an offcut accordingly to fit on the top and bottom of the wine rack, completing the 'box' (see the image). Secure these in place with small nails and a hammer. Do the same at the back in-between each trellis. This will act as a stopper so that a wine bottle won't fall out the back if pushed too far.

The colours are rustic and the copper and dark wood combination gives the feel of a wine cellar. This wine rack can be placed on the floor, on a table surface, be displayed on its side or fitted snugly between those hard-to-fill gaps sometimes found in the kitchen (such as next to the fridge.) ✂



10
Use offcuts to create stoppers at the back side of the wine rack

Service your own power tools

Bob Gillies from Diesel-Electric Industrial Springs has 48 years of experience repairing power tools – this month he shows us how

All electric power tools have bearings, carbon brushes, cables and plugs and these must be in good condition to maintain performance. Over and above that, service and replacement of worn or broken parts can help to extend the life of your power tools.



Tools & materials

- Small spanners
- Screwdrivers and bits
- Can of oil
- General-purpose soft grease
- Paraffin

There may be instances where a few more hand tools may be needed, but these are most likely already in your workshop. Four pound hammers, pipe wrenches and pry bars are not necessary. Some rags and ear buds are needed to clean away old grease and grime. If you have one, a small compressor is most useful when blowing out dust from power tools.

Disassembly

Most power tools have a clam shell construction, which means the housing splits in half. These are easy to open by removing all body screws and taking off the top half of the cover. This will reveal the internals of the power tool. Be aware of any small parts, especially springs, which may fall out.



Tip

Take a photograph of the internals before disassembling the smaller bits. You can refer to this later should you forget where everything fits in.

If the power tool being disassembled has screws of the same size, keep these and other small parts in a single tub. If there is a variety of screw sizes, screw these into the hole they came from immediately to avoid confusion later.

Assessment

With the power tool open you can begin with assessment of the mechanical components. Look for damage, cracks or





1

Split the body of the drill in two exposing the mechanics inside

wear on plastic casings and all moving parts, ensuring that these are moving freely. Also look for signs of heat as well as melted or burnt components.

If you find a melted bearing housing, depending on how bad it is, a strip of thin rubber placed under the new bearing may hold it in place. If an electronic component burns out, it normally releases an unmistakable smell that lingers inside the body of the tool and the blown component. Damaged parts must be sourced before going any further.

Power cord

When, for no apparent reason, a power tool stops working, start by checking that the tool is getting power. Inspect the cord insulation, plug, as well as the place where the cord enters the power tool – there is normally a rubber sleeve where the cord enters the power tool. Check that the power wires inside make good connection at the terminals inside. These may need to be soldered back in place or the spade connectors crimped for a tighter fit.

Brushes

One of the most common parts to wear out on power tools is the carbon brushes. These must be removed from the brush holders.

If they are worn, replace them with original ones from the manufacturer. Brushes with limited wear can be cleaned and oiled with ordinary motor oil. When checking the brushes, the face must be smooth and shiny. Any roughness or breaking away at the edges could mean a problem with the motor. There shouldn't be any sparking at the brushes as this means there is a fault and this will wear the brushes prematurely.

Gearboxes

Very few power tools use direct drive and most use gearboxes to increase torque and reduce strain on the motor. If tools are not used regularly, grease in the gearboxes can dry out – in fact, the same is true for those



2

There is some blackening of the commutator



3

Not much of the original grease remains on the gearing

used regularly. Replace this grease with enough grease to coat the gear teeth plus a bit extra. This also applies to larger non clamshell designs.

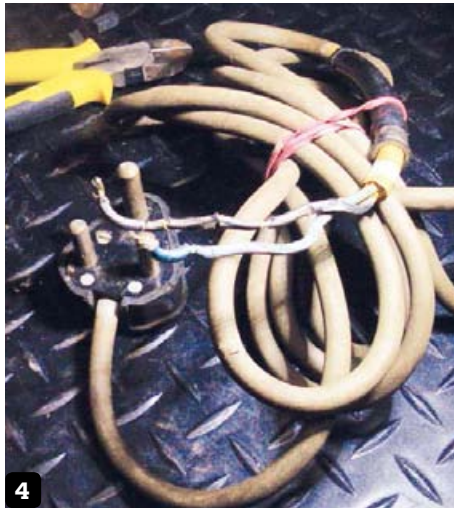
Bushes and ball bearings

Bearings must be checked for roughness or stiffness. If they are spun between the thumb and finger and they spin for some time, they're dry and should be replaced. Some bearings have rubber seals and these can be picked off carefully with a darning needle or pointed object exposing the cage and balls inside. If the bearing runs smoothly, just a drop of engine oil and

small amount of grease can be put into it and the seals pressed back into place.

Some bearings are more difficult to remove than others, particularly when they have been pushed on, and some require a bearing puller. If the bearing doesn't feel bad, oil can be run down the shaft into where the bearing is. After an hour or so it will penetrate sufficiently and extend the bearing life.

Some places inside the power tool may use brass bushes instead of roller bearings. Re-oil the shaft and bushes with some drops of oil deposited inside the roller between the bushes, then reassemble and wipe away excess oil.



4 The electrical cable insulation had perished



5 Removal of the brushes revealed worn out brushes



6 The basic components of the drill including the armature, windings, gears as well as the chuck and main shaft



7 Washers, bushes and other small parts were washed in paraffin



8 A hex drive was used to press bushes back in place after cleaning

Common problems

- **Circular saws** have a small gearbox and this must be replenished with grease regularly.
- **Drills** have high rpm, causing brushes to wear if used regularly.
- **Belt sanders** have roller guides to keep the belt running straight and these must be oiled regularly.

Reassembly

Make sure all moving parts of the power tool have been cleaned, lubricated and are not stiff or too loose. Reassemble the armature, brushes and any other parts and close the casing, making sure it closes fully and easily before putting back all the screws. ✂

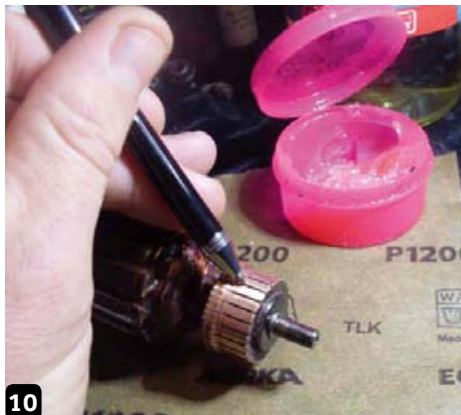


Tip

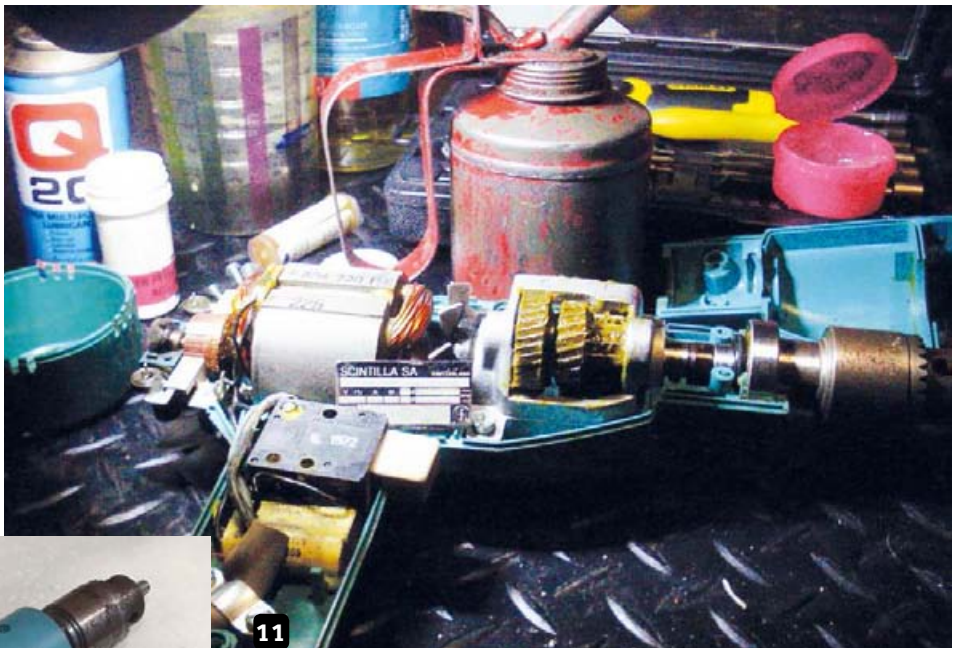
Avoid stripping screw holes by over tightening screws – just enough to grab is tight enough.



The bearings were repacked with fresh grease



Some fine grit sandpaper and a ball point pen run between the commutator contacts polished it up nicely



All moving parts have been greased up or oiled and we're ready to reassemble



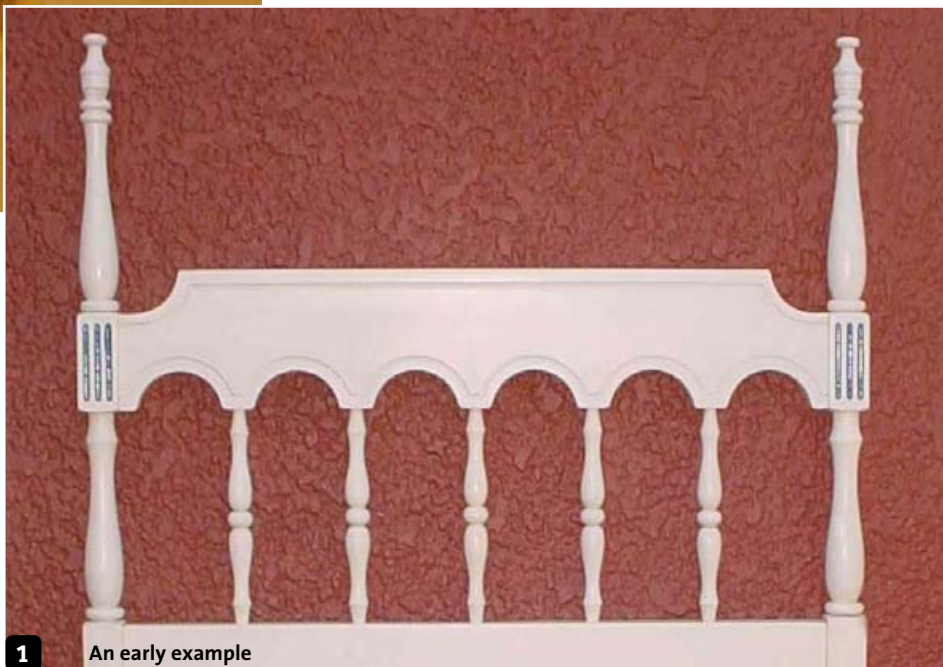
After a full service my grandfathers 1968 2-speed Bosch green drill is good to go for another 46 years

Pattern routing

Denis Lock explains that pattern routing is not only for curved pieces

Pattern routing is generally described as a technique for producing curved components for woodworking projects. Photo 1 (taken 50 years ago) shows my first ever pattern routing project: a headboard for a bed for my daughter. The top rail is a combination of edge-pattern routing (the overall shape) and face-pattern routing (the 6mm-wide half-round groove that echoes the outline). Photo 2 is a more recent project: patio chairs for my elder son. The components are shown in photo 3. The three curved pieces (16 of each were required) were cut out on a bandsaw and then pattern routed. Photo 3 also shows the pattern (9mm MDF) and router table set-up to rout the chair arms. The pattern was attached to the blanks with two screws. The screw holes were on the underside of the arms and thus hidden.

As I do more work with plywood, MDF and chipboard, I find myself increasingly using pattern routing to produce rectilinear shapes. The resins used to manufacture these man-made boards are very tough on high speed steel blades and these boards



1 An early example



2 A more recent example



3 Components and one of the patterns



4 A cut-out in the carcass sides

are banned from my jointer. They are also tough on router bits, but the tungsten carbide tips do stand up a lot longer. Rectilinear components made from solid wood are fashioned using a table saw and jointer. Those made from man-made boards are handled on a bandsaw (or jigsaw) and a router. Let me share some recent examples from my workshop with you.

The first is a vanity unit (photo 4). It will be noted from the photo insert that there is a cut-out on the sides of the drawer units. This is to clear the basins that extend below the slab. These were pattern routed as shown in Photo 5.

The pattern consists of two pieces (marked 1 and 2) of 9mm MDF glued to a 3mm MDF substrate. I don't try to cut out an L-shaped pattern. I build it up from two simple rectangles: one large, one small.

I am currently helping one of my students build a shoe storage carousel. It needs eight octagonal shelves made from 19mm plywood. These can be seen in photo 6 along with the 9mm MDF pattern used to



5 Pattern and result

pattern rout eight identical shelves. The pattern was attached to the underside of each shelf in turn with four screws. The screw holes will not show (unless you lie on the floor and look underneath the shelves). The pattern was then used as a guide to roughly cut square blanks to octagonal shape on my bandsaw (photo 7). It is much easier to do this step on a bandsaw than on a table saw. Then to the router table (photo 8) to trim the band-sawn edges to match the pattern.

Another project at the moment is a padded headboard to go with the mahogany pedestals I recently made for my younger



6 Octagonal shelves



7 The pattern helps with bandsawing

son's bedroom. These were documented in the May, June and July 2016 issues of *The Home Handyman* magazine. Photo 9 (a work in progress photo) shows the trial fitting of the padded panels in order to determine the final sizes of the surrounding frame. The panels started out as 16mm chipboard rectangles which were taken to the upholsterer to pad and cover with our chosen material. The four panels must be dead square and identical in size as they will be fitted into a rebate in the surrounding frame. Pattern routing is the answer. The first panel was accurately sized and squared and then used as the pattern to cut the remaining three. It was not necessary to make a separate pattern. The fact that four screw attachment holes were drilled through the first panel didn't matter. They are covered by the padding. Photo 11 shows the pattern routing being done. In no time flat, we had four identical (and I mean identical) panels.



Pattern routing octagons



Padded headboard

In two of the above examples, the pattern was held to the work with screws. This approach can be used when the screw-tip holes are hidden in the final product. The routing can be either done by hand or on a router table. Make sure that the screws are countersunk below the surface of the pattern. You don't want to scratch your router base or router tabletop. In the vanity unit, example C-clamps were used. This had to be hand routed. You can't use C-clamps and rout on a router table. Note that screws could have been used in this example: the screw-tip holes would be hidden as the carcass sides are hidden behind the face frame and doors.

If screw holes are a no-no, you must use clamps, double-sided tape or some other method to hold the pattern to the work. One of the exercises on my 'Fundamentals of hand-held routing' course is shown in photo 11. The students pattern rout the face of a simulated (scaled down) MDF cabinet door. The pattern (like the one in photo 5) is built up from eight pieces glued to a 3mm substrate. This can be seen in the two views on this pattern on the right side of photo 11. It will also be seen in photo 11 that four lugs have been added to the underside of the pattern. The resulting frame holds the pattern to the work. This approach works well, but means that the blank must be accurately sized in order to be a good fit. As mentioned earlier, I will not trim MDF on my jointer. I use a lot of these blanks and

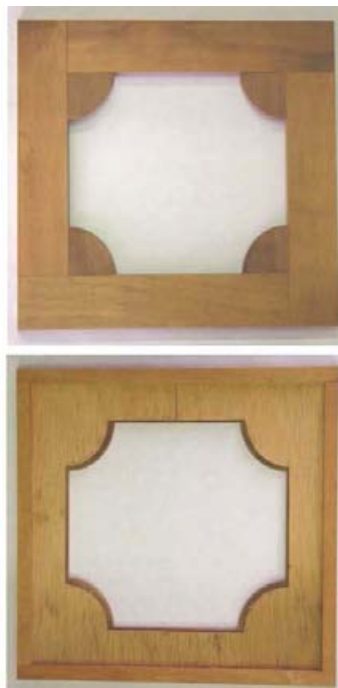
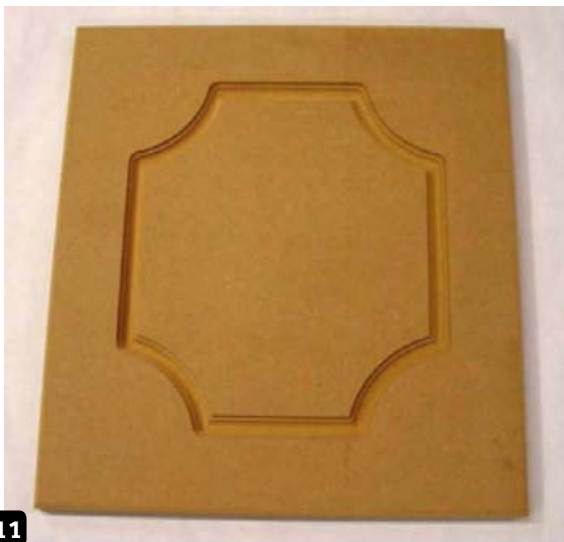
end up making a lot of dust while sanding them for a good fit. Why hadn't I thought of pattern routing before?

I took a previously well-fitting and routed blank (now essentially scrap) and used it as a pattern. I couldn't use screws to attach this pattern as I didn't want screw-tip holes in the new exercise blanks. Double-sided tape was considered, but I decided to use a C-clamp approach. The pattern was placed hanging over the corner of my workbench (photo 12) and a new exercise blank clamped on top of it (photo 13). I made sure the blank (roughed out on my bandsaw) overlapped around the full periphery. The first routing pass trimmed about 60% (photo 14). Before loosening the two clamps holding the template plus blank to the bench, I added a further two (the smaller clamps seen in photo 14) to keep the template and blank being routed aligned. The assembly was rotated 180°, re-clamped to the bench corner, the smaller holding clamps removed and the routing completed (photo 15). The resultant blank fits well as is seen in photo 16.

As can be seen in photo 8, I use a bottom bearing or flush-trim bit for the table pattern routing examples documented in this article. I prefer to have a bearing and grub screw, as opposed to a sharp tip, sticking out of my router table. Note, however, that I still use a combined bit guard and vacuum port. I also prefer a



Pattern routing headboard panels



11

A class exercise:
Top left: Routed door panel
Top right: Built-up pattern (face)
Bottom right: Pattern (underside)



12

The pattern overhanging the corner of the bench



14

Two more clamps added



13

Blank and pattern clamped to the bench



15

Completing the routing



16

A good fit



16

Bottom-bearing bit

bottom-bearing bit when using a hand-held router (photo 18). If I inadvertently tip the router, the bearing pivots on the pattern and the work is not gouged. A second pass then cleans up the cut. This does not mean to say that I don't use top-bearing bits for pattern routing. There are many situations where they are preferable. I hope I have convinced you to look out for opportunities to pattern rout straight edges as well as curved ones. Watch out for an article on the headboard featured in a future article. ✂



Contact

Denis Lock runs a router school and shop in Bedfordview, Gauteng. He can be contacted at denis.lock@worldonline.co.za or 082-267-5948. Visit his website at www.routingwithdenis.co.za

The Woodworker's Corner is a woodworking showcase



Intricate scroll saw work

This Victorian hanging wall clock on the left is cut from maple veneer, with rosewood used for the dark sections. It won yet another first prize for Godfrey Howes at the recent prestigious Bathurst Agricultural Show. He is a committee member of the Lower Albany Woodworkers' Guild and a member of the Grahamstown Woodworkers. His work can be seen at the monthly markets held in the Rosehill Mall, Port Alfred and in the gallery section of the website.



To view more work

Visit: www.grahamstownwoodwork.co.za
Email: merylhowes@border.co.za

Scale toy making

This is a JCB equipment scale model made out of mainly yellowwood and imbuia wood. The project took 202 hours to complete. Although I did use a lathe to turn out some of the bits and pieces, the biggest and most important tools are 'patience and persistence'.



The project started with a visit to a local distributor of JCB equipment, who allowed me to take a few photographs and basic measurements. My first lesson learnt is to take photos 'square' at 90° with the subject and at a fixed distance from it to facilitate future scaling. It also ensures that the shape of parts is true and easier to copy. The challenges faced meant that many hours were spent on the project, but it ended with a great sense of accomplishment and satisfaction. The affirmation I get from family members only encourages me to do greater things.

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

I recently became a member of the Witwatersrand Woodworking Association. During my first two meetings with this exceptional bunch of friendly professionals, I realised that I still have so much to learn. I am looking forward to drawing on their expertise to keep improving the quality of my own work.

Douw Kruger



BOOKSHELF

General manager at Hardware Centre Marius Ackerman reviews the latest in woodworking literature

Woodshop Dust Control

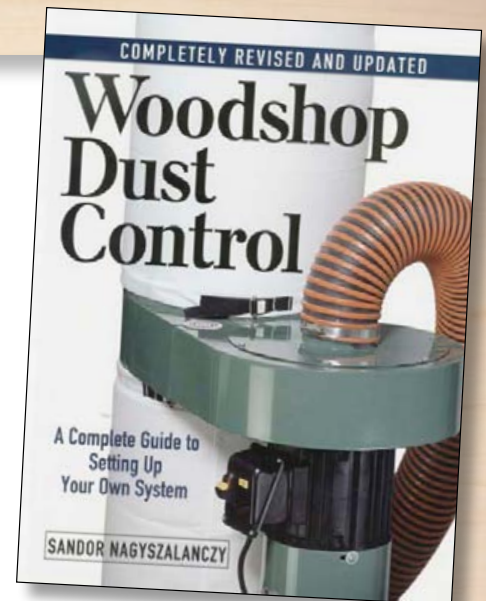
Author: Sandor Nagyszalanczy

Publisher: The Taunton Press

Sawdust must rate as one of the most hazardous aspects of woodworking, especially in an enclosed environment like a workshop. While a well-known danger, the process of controlling potentially harmful dust is often overlooked or seen as a luxury by many woodworkers setting up a workshop.

Woodshop Dust Control provides you with a complete guide to all methods of protecting your lungs from the harmful effects of wood dust. This edition, completely revised and updated, helps you with the latest information on dust control and collection products. It shows you how to develop an effective dust control strategy for your workshop, including designing and installing a custom dust collection system.

The book is written by Sandor Nagyszalanczy, a former senior editor of *Fine Woodworking* magazine and the West Coast editor of *American Woodworker*. The processes and projects are explained in an easy-to-read way, and is richly illustrated with full colour photographs. A must-read for anybody setting up a workshop or those who want to improve dust control in existing workshops.



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



Eighty-year old Oregon floorboards

I decided to make use of old Oregon floorboards I had by up-cycling them into two two-seater patio settees using my own plans. After careful inspection for embedded nails, tongue and groove edges were removed and the boards were passed through a thicknesser to remove the rough underside and render the boards to the same dimensions (17 mm). The legs were made from several boards glued together to increase strength and improve aesthetics. All T-joints were biscuited and glued and the armrests were dowelled. The backrest was hinged to allow for rake adjustment. The seat slats were made from pine – can't waste good Oregon there. A satisfying result for a few weekends work!

Craig Viljoen



Woodworking associations

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

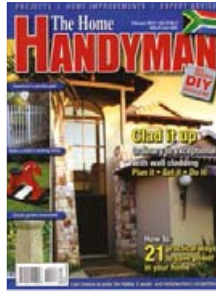
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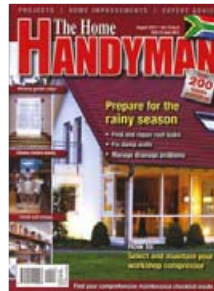
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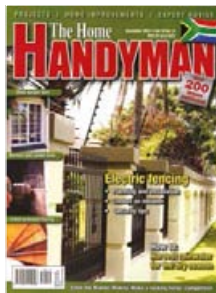
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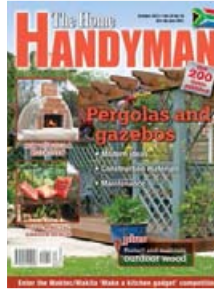
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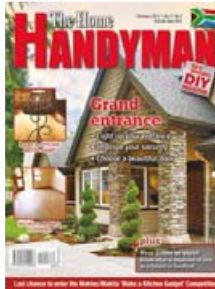
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Let's get social

DIY has a social media side as well

Popular Facebook posts

Build a foldaway bar

<http://ow.ly/g29K3ooSHH1>

#homehandyman

#outdoorbar #foldingbar



Throwback Thursday

Guide to restoring antique wooden items. Watch the video:

<http://ow.ly/MlyT3ooSHb5>



Get the right doors and locks



June was National Home Security month!

Choosing a door with the correct security for your home isn't as simple as you may think. Find out how to make the right choice:

<http://bit.ly/1WxPLC6>

See the video

We have had a good response to our behind the scenes video of the team building a carriage clock. Go to our website:

www.homehandyman.co.za

or view it on our Facebook page and give us your comment.



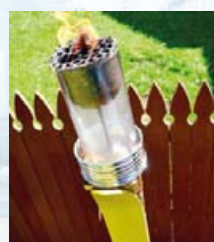
We are on Pinterest!

The most popular pin of the month was: **Drainage solutions for a waterlogged garden.** Find it in our 'DIY How to' board.



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Handy Tweets



@MyFixitUpLife

Summer and winter came together for this DIY project: #KrylonCreated
<http://ow.ly/B1nT3o1wGT>



@HandymanMag

Make a customised spice drawer:
<http://ow.ly/51lx3o1gYQU>



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Top tip Tuesday: Built-in cupboard upgrade. Find out how:
<http://bit.ly/1TULstU>
#homehandyman #builtincupboard

At the polls

The results are in for the below poll:

How often do you go onto Facebook?

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Adult entertainment

Reuben the Screwman loses some illicit material to a rented video machine

As I lay in bed writing this column looking out over the little village of Barrydale, it was covered in a blanket of mist as thick as pea soup. The electric blanket was on three and an aroma of steaming black coffee filled the air – life could not get better.

For reasons that cannot be explained, I cast my mind back to a time in this diverse country of ours when *Scope* and *Ster* were publications that were forever pushing the envelope and were banned more often than not two weeks after going on sale (a marketing ploy, methinks). It was a time when possession of *Playboy* fell into the same category as murder. At this time, an incident occurred that involved me, a rented video player and a movie in a brown paper bag.

I popped the movie into the machine and like a crocodile, it hungrily swallowed my contraband

A friend had managed to get his hands on a copy of *Caligula* – a film about the rise and fall of the Emperor Caligula. The movie starred the vivacious Hellen Mirren in the nude. It was high on the list of contraband material, and being in possession of it made you as nervous as a cat at a dog show. Back in the day, very few people owned a video player; it was something you hired with a movie on a Sunday evening and this Sunday was going to be no different – well, so I thought. It turned out to be different, very different. In fact, it was epic.

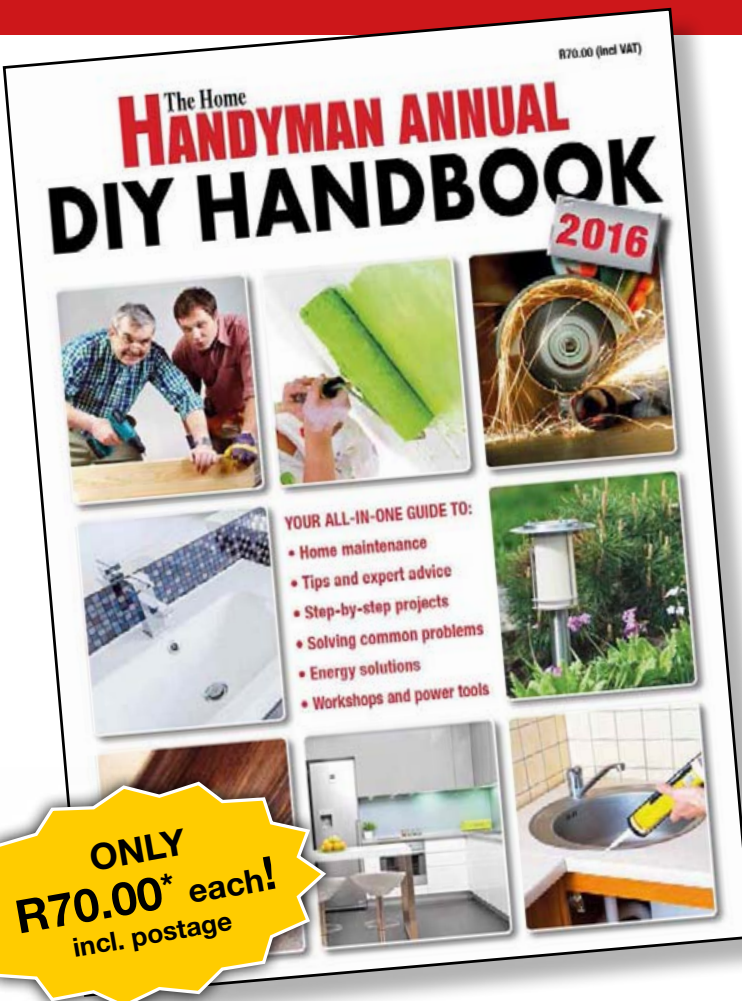
I invited a few friends around to be my partners in crime. At least, if I was arrested, I wouldn't be doing time alone in 1 Potgieter Street. As usual, I popped into Budgie's Video Hire. "Good afternoon, Mr H. One or two movies for you today?" Budgie asked. He was a tiny Chinese man with little, bony fingers like twigs and a knowledge of movies that could put most movie critics to shame. "I would just like a player today, thank you Budgie," I replied. Forever the salesperson, he replied, "I only do machine and movie – no machine only. Machine no good without movie anyway." Mmmmmmm, I had not thought this one through; I would make a lousy criminal! Two movies and a machine in hand later and the deal was done.

It was a Betamax machine, one that popped up like a skyjack at the airport. Biltong, beers, popcorn and corny jokes set the mood for this epic event. I popped the movie into the machine and like a crocodile, it hungrily swallowed my contraband, never to return it in one piece. I pressed play, but 'play' was not on its 'to do' list that night. Instead, it rewarded me with a gurgling sound, as it ripped and devoured the tape from its casing and wrapped it around each and every moving part in the machine. And believe me, there were many, as I later discovered.

How was I to take this defunct machine back to Budgie? How was I to explain the contraband in the machine? With a toolkit consisting of a nail file, a pair of tweezers and a bread knife, we spent the rest of the evening removing bits of tape tightly wrapped around each and every moving part of the machine. It was around midnight that the last screw was finally screwed back (with a few extras still on the floor) and we decided to call it a day, or more aptly, a nightmare!✂



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