

The Home HANDYMAN

March/April 2019 • Vol 29 No 3



SA'S
ORIGINAL
DIY
MAGAZINE



POOLSIDE CADDY



CANDY DISPENSER

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- Storage tips
- Maintenance

+plus

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CONTENTS

The Home Handyman is published bi-monthly (6 issues per annum) by WJ Lindeque cc t/a BB Print (CK99/23366/23)

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Printing House of Print | 011 474 8750

Distribution Republican News Agency | 011 248 3536

About *The Home Handyman* magazine:

The Home Handyman magazine is a specialized D.I.Y. publication and caters for a well-defined niche market since November 1993. The magazine equips its ever-growing readership with relevant D.I.Y. information, knowledge and skills.

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FEATURES

12 Environmental

Greywater systems for your home

16 Solutions

Warren Schmidt looks at ceiling insulation

20 Vehicles

A review of the JMC Single Cab SWB Carrying

22 Power tools

Essential tools for DIY'ers

26 Woodworking

Clifford Roberts & Andries Eygelaar build a retro bookshelf

30 Outdoor

Garden drainage solutions

34 Personality

Meet workshop facilitators Jade and Given

36 Techniques

Make and use your own acetate stencil

39 How to

Balance a ceiling fan

40 Painting

Repair and paint up an old piece of furniture

42 Metalworking

André Gous makes a poolside towel caddy

46 Electronics

Kin Le Roux makes a metal detector

50 Young DIY'er

Build a dispenser for jelly beans

62 Info zone

Types of drinking water



12

REGULARS

6 Off the shelf

All the latest products for the DIY'er

8 Voice your views

Your chance to air an opinion

10 DIY matters

News, views and reviews from around the globe

49 Bright ideas

Readers share their innovative time-and-space saving DIY ideas

52 Ask our experts

Your DIY queries answered by our panel of experts

54 A woodworker's diary

Denis Lock takes a look at router table construction

58 Woodworker's corner

Sharing techniques, ideas and a love of wood

60 Showcase

Woodworkers showcase their projects

61 Coffee corner

From our workshop to yours

64 Tailpiece

Annalien Grensemann heeds a call to DIY



22



40



46

Competitions & giveaways

- 7 **Win** an adjustable angle pull-through knife sharpener
- 8 **Win** a Makita M5802B circular Saw
- 9 **Win** a Tork Craft cordless oscillating tool
- 35 **Win** a DIY workshop session at Leroy Merlin
- 49 **Win** a Tork Craft HSS 5-piece wood turning chisel set
- 52 **Win** a Mac Afric multi grinder and knife sharpener

The Home HANDYMAN



www.homehandyman.co.za

2019 SUBSCRIPTION FORM

Subscription Fees:

South Africa	Printed	Digital
Back Copy	R35.50	R27.95
6 issues	R209.00	R169.00

Neighbouring countries: R528.00 for 6 issues

Overseas by Air Mail: R618.00 for 6 issues

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FROM THE WORKBENCH

A word on water

Welcome to another issue of *The Home Handyman*.



Did you know that World Water Day is celebrated annually on March 22? South Africa celebrates National Water Week during the same period, an event that focuses public attention on the importance of water, one of South Africa's most limited resources.

World Water Day is a United Nations observance day that highlights the essential nature of fresh water. The day was first celebrated in 1993 after delegates at the UN Conference on Environment and Development in Rio de Janeiro recommended it to delegates the previous year.

In 1948 in the Universal Declaration of Human Rights included food, shelter, clothing and medical care but excluded water and sanitation. It was only in 2010 - over 60 years later - that the UN Human Rights Council recognised "the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights."

Water represents life on our planet. South Africa's demand for water is ever increasing - not only for safe drinking water, but also for those industries that rely on water for their operations.

Just a year ago the Western Cape was facing Day Zero when taps in the province were set to run dry. Good winter rains helped to alleviate the dire situation and by the end of 2018 critical water restrictions had been somewhat lifted.

Despite good summer rainfall in the north eastern parts of the country, other regions are still experiencing crippling drought conditions. The onus is on all South Africans to save water. In acknowledgement of National Water Week in March, we have dedicated this issue to all things water.

On page 12 you'll find ways to reuse greywater for garden irrigation. There are different systems available to suit any pocket and even if you just save a bucket of water from your shower or a few buckets from your bath, you can make a difference. This water can be used to water plants in containers or flush the toilet. Take a quick moment to check your water and electricity bill. Many of the big metros no longer provide six kilolitres of free water. How much can you save if you reduce your water consumption?

Features writer, Warren Schmidt, takes a closer look at a different side of water (page 30) - too much water and drainage problems in the garden - common in Gauteng at the moment with the good summer rains.

There are also a number of projects to tackle in this issue - a poolside towel caddy, retro bookshelf, candy dispenser for the kids and a really great metal detector. Please send us photographs of your completed projects!

Take care,

Gina



Boskoors Adventure Camp

24-29 March 2019

We at BosKoors are inviting all avid young anglers between the ages of 7-16 years to join us for loads of fun and adventure.

Venue: Boskoors Farm, 30km North of Pretoria on the Moloto Road.

Bookings are essential!

We have limited spots available as we like to keep the number of campers at a minimum, to ensure that every child gets the necessary individual attention and guidance.

Please call Wilma on 065 849 3264 or 083 306 2718 to book your spot. For more information visit www.sabass.com or e-mail wilma@sabass.com



OFF THE SHELF

Your guide to the latest products in the world of DIY

Plunge type router

Designed for high quality performance and durability

The Makita MT M3601B plunge type router has a 900W motor that delivers a no-load speed of up to 27,000 rpm. A 0 - 35mm plunge depth capacity and three stage cut depth adjustments allows for easy penetration into or through the work-piece.

The M3601B has a chip deflector to stop chips flying towards the operator, a plunge lock level to set the desired routing depth, a collect capacity of 6,35mm and a three stage stopper block for your depth adjustments as well as an easy-to-read depth scale.

The flat top design of the M3601B with its raised ribs makes the changing of bits quick and convenient, while the ergonomically designed handles with the easily operable trigger switch enhances the operator's comfort.

Standard equipment includes a straight guide, straight bit, collet cone and wrench. At only 256mm in overall height, weighing 2,7kg and supplied with a 2m power supply cord the M3601 is the perfect tool to get you into the groove.

For more information: Visit: www.makita.co.za or Tel: 011-878-2600



Effective adhesive

A.Shak launches a new adhesive

A.Shak has launched Double-Bubble, a new adhesive solution that is strong and versatile and contains no solvents. It does not shrink and cures at room temperature. The product is quick drying and easy to use. Packaging with a handy top cut-out makes it easy to hang up in your garage or workshop for quick access. Adhesives packed in larger volumes tend to dry out, but with Double-Bubble's small packages, you'll use what you need for most jobs, resulting in a saving of money and time.

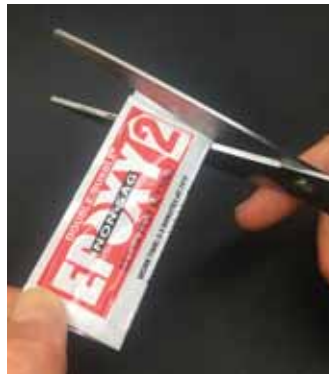
The product is suitable for bonding metal, wood, concrete, glass, ceramics and most hard plastics.

Available in 4-pack and 2-pack options.

For more information: Visit: www.ashak.co.za or Tel: 0861-127425 (ASHAK)



Fold



Cut



Squeeze



Mix and apply

Cordless mini palm sander

It's small, light and compact with a super powerful 12-volt lithium battery

Just launched is the powerful Tork Craft cordless mini palm sander. The compact size, weight and comfortable top allows you to operate it single handed. Like all Tork Craft power tools this cordless unit has some stand out features, an excellent auto dust collection box and handy battery level indicator. The 12V 1.3Ah Lithium Ion battery gives you plenty of running time and the fast charger will get you going again in 60 to 80 minutes.

The triangular pad design allows you to get into the tightest of corners, spaces, small gaps and all edges. The units powerful motor revs to 11,000 rpm. The new unit comes with three sanding paper grits; 80, 120, and 180.

For more information: Visit: www.torkcraft.com or Tel: 011-314-7711



Knife sharpeners

Smith's is a fast-growing, full line supplier of sharpening products

Their goal is to provide consumers with the best edge for whatever task they are performing, while also providing good customer service; a philosophy that Awesome Tools supports in all the brands that they offer.

Smiths have the broadest line of knife and scissors sharpeners available, ranging from simple, fixed angle pull through sharpeners for consumers that want quick and easy sharpening, to sophisticated Precision Kits designed for the knife sharpening enthusiast. Their offering includes both manual and electrical sharpeners that incorporate many different abrasive materials including diamond, carbide, ceramic, bonded synthetic abrasives and natural Arkansas stones. These sharpeners are suitable for all kinds of blades from straight edged, serrated, scissors, broad heads, gut hooks, fish hooks to pointed objects.

For more information: Visit: www.awesometools.co.za or Tel: 021-981-6672

An adjustable angle pull-through knife sharpener:

- Easy to adjust knob allows sharpening at a wide range of angles
- Sharpens a wide variety of knives
- Two stage sharpening for standard edge knives (coarse and fine)
- Serrated blade sharpener (fixed angle)



valued at R595

To enter, email: editorial@homehandyman.co.za

Please put KNIFE SHARPENER in the subject line. Please include your name, surname, physical address and a contact telephone number (office hours) in the body of the email. Competition ends 31 March 2019.

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VOICE YOUR VIEWS

Do you have any thoughts or comments on DIY issues?



Share your
opinion

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Send us your views, ideas and opinions and you could win a Makita M5802B circular saw.



Send your queries to:
editorial@homehandyman.co.za or
P.O. Box 24938, Gezina, 0031

Please include your name, physical address and contact number (office hours)



**James van
Heerden**

wins a Makita MT random
orbital sander M9204B

Prizes are not exchangeable

For the love of woodworking

WINNER



I really do love woodworking and in my opinion working with wood is an art form, but you must be fairly competent in various skills and that is what makes woodworking so fascinating and wonderful to do.

I have been exposed to working with wood since my childhood as woodworking was my late Dad's passion, which he managed to transfer to me at a very early age. He had a fully equipped workshop and at that time (during the 1950s) it was something to see. You name it, he had it! Table saw, a massive thicknesser, drill press, planer, scroll saw, lathe and a variety of handheld machines. I took woodworking as a subject at school and really enjoyed those classes. As a matric project I made a bedside cabinet, which is still used by my granddaughter today. I am now 76.

I can remember making some spinning tops on the lathe, stools and other things. However, woodworking is not something that you can pick up overnight as there are so many skills

to master or at least be fairly competent at.

I am not a qualified woodworker and what I know I've taught myself by reading and following some good plans, drawing some plans myself – and a lot of advice in *The Home Handyman*.

The machines and techniques we used back then have changed significantly and make the work much easier to perform today. Regardless, the basics of woodworking are still the same and if we follow these, we cannot go wrong.

There is, however, something very satisfying about making your own 'thing' from a piece of timber you bought from a timber yard. Then sawing, planing, measuring, figuring out some intricate plan, making joints, jigs, sanding and finally glueing the lot together and putting some finish on. Satisfying!

James van Heerden, by e-mail

*Thank you for your letter, James.
We hope to see more of your
projects soon. – Ed.*



Celebrating good service

I recently had a problem with my Fascor FH10 pop-riveter, hereafter called 'the tool'. I stress that the tool was several years old, had been previously used and I had no record or proof of purchase and it was way out of any guarantee or warranty. The problem was that the rivet would be popped okay, but the broken-off shaft was securely locked in the tool's jaws and could not be removed.

I managed to disassemble, fix and reassemble the tool, which then worked just once more before jamming again. This time there was no way I could fix things so I abandoned hope and resigned myself to buying a new riveter. But because this had happened to me with the FH10 before, and because it's a premium brand at a premium price and I'm a pensioner, I reluctantly decided to downgrade to a cheaper unit that wouldn't be in the same class but at least be cheaper to replace if it should fail.

I decided to describe my experience and express my regrets to Matus, the company that markets the Fascor

product range. I made no adverse comments and had no expectations – after all, I'm just a DIY'er. So imagine my surprise when my doorbell rang and there stood a Matus man, who presented me with a brand-new FH10, delivered at no charge. He even waited while I unpacked the tool and used it, just to be sure that all was well – and it was.

That's customer service and product support for you! I'm at a loss for words but I'm a definite Matus fan now and hugely impressed with their attitude and response.

Chris Graham, by e-mail

A real good news story, Chris. Thank you for sharing. – Ed.



'For illustration only'

Reader's projects



The Home HANDYMAN

www.homehandyman.co.za

Willing to share your latest project with our readers? Send a step-by-step write up of how to make the project, along with step-by-step photographs (at least 300kb) and a picture of the finished product.

E-mail projects and photographs to:

editorial@homehandyman.co.za



Find the answer **in this issue** and win the new Tork Craft multi-functional cordless oscillating tool TCOT001, sponsored by Tork Craft

Question: What is the Tork Craft TCOT001's maximum rpm?

Send your answer to:

editorial@homehandyman.co.za or P.O. Box 24938, Gezina, 0031

Please put TORK CRAFT COMP in the subject line. Please include your name, surname, physical address and a contact telephone number (office hours) in the body of the email. Competition ends 31 March 2019.



valued at R1684

Jannette Nel

WINNER

of Villieria, Pretoria won the Zodiac pool care hamper valued at R2000, featured in our January / February issue. Congratulations Jannette!

Prizes are not exchangeable

New minimum wage affects casual workers

Do you hire casual labourers to help you with various jobs on your property? The new national minimum wage came into effect on 1 January 2019. President Cyril Ramaphosa signed off on the National Minimum Wage Bill at the end of November 2018. The new minimum wage is set at R20 per hour.

According to Jaco Swart, national collective bargaining co-ordinator at the National Employers Association of South Africa (NEASA), the National Minimum Wage Act defines a 'worker' as 'any person who works for another and who receives, or is entitled to receive, any payment for that work whether in money or in kind.

"This definition is much wider than the definition of an employee as contemplated by the Basic Conditions of Employment Act, which excludes independent contractors and, to some extent, casual employees from its scope," explains Swart. "The conclusion that one has to draw from that is that all workers, including independent contractors and casual employees, will fall within the scope of the Minimum Wage Act and will therefore be entitled to be paid at least the minimum wage."

It should also be noted, that you are responsible for ensuring the safety of workers on your property and they should be supplied with personal

protective equipment (PPE). Depending on the work required, you should supply safety glasses, a dust mask and gloves. If the worker operates power tools or equipment like a lawn mower, weed eater or leaf blower, ear protection must be included.

For more information, visit:
www.neasa.co.za



The law and flame failure devices (FFDs)

The SANS 1539 standard is very clear on where a stove, which does not have a flame failure device (FFD), may or may not be used.

The standard defines a flame failure device as: "A safety device that is permanently installed in the appliance and that is used to automatically shut off the gas supply to a burner when the flame of that burner is extinguished."

Homeowners should note that a hob or stove which is not fitted with a FFD may not be fitted, installed or attached to any form of fixed piping. It may only be used when connected to a cylinder which is free standing. Installers may not install appliances without an FFD.

For more information, visit:
www.lpgas.co.za



Use and store chemicals safely

- If the chemical product has a toxic warning, it must be stored in a locked cupboard, out of reach of uninformed persons or where pets may bump them over. This includes rodenticides, insecticides, weed killers, fertilisers and pool maintenance chemicals.
- If you use chemicals like rust and paint remover, protect your eyes, lungs and skin and where possible choose water-based products.
- When working with chemicals, including thinners and mineral turpentine, make sure the area where you are working is well-ventilated.

The Home HANDYMAN
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Don't miss *The Home Handyman* stand at *Hobby X* at the Ticketpro Dome in Northgate from 7 to 10 March

Hobby-X
The wider world of hobbies



PLUMBING
INDUSTRY
REGISTRATION BOARD



Plumbing Industry Registration Board (PIRB)

The PIRB is a South African Qualifications Authority registered professional body, that proactively works to promote better plumbing practices.

Plumbers that register with PIRB are recognised as competent and properly accredited tradespeople within the plumbing sector. As of December 2017, the mandatory SANS 10254 stipulates that certain plumbing works require a certificate of compliance (CoC) from the professional body for plumbers registered in terms of the relevant national legislation.

This means that only Licensed PIRB Plumbers can issue a PIRB CoC. This stipulation not only protects the environment but the consumer too, as the consumer has recourse if needed. Registered and qualified plumbers uphold very strict standards required by the PIRB, as not only are 5% of all logged CoC's audited but plumbers have to accumulate their Continuous Professional Development (CPD) points in order to retain their designation as a Licensed plumber on an annual basis. The PIRB ensures compliance to industry standards, as well as promotes public trust in the plumbing sector which nurtures the symbiotic relationship between the consumer, the plumber and the environment. Most municipalities, insurance companies and the building industry only work with PIRB plumbers which provide the community with quality assurance in the plumbing environment.

For more information, contact 0861-747275 or visit: www.pirb.co.za



Tanya Visser

Catch *The Gardener* on DStv in March

Be inspired to get creative in your patch of earth with sustainable and practical advice on what to do, when and how to get it done. Stock up on buckets full of step-by-step guidance, inspirational ideas to try at home and tips to maintaining a healthy garden. Presented by garden guru, Tanya Visser.

Date: 5 March 2019

Times: Tuesdays at 9pm; Fridays at 5pm

Over the Rainbow Bridge

The Beloved *Dulux* Dog, Oscar, passed away at the age of nine and a half years. Oscar featured in numerous TV adverts. He brought happiness to many lives through his work with *Dulux* and the Joy Dogs, a therapy dog and educational organisation started and managed by his owner.





Grey greens the way

Whether you collect shower water with a bucket or consider a more permanent system, greywater can help save you money – and keep your garden looking good


>> Gina Hartoog

While many areas of the country have experienced good seasonal rains, there are many areas still in the midst of extreme drought. For the better part of 2018, Capetonians were under severe water restrictions, down to 50 litres per person per day. At the start of December 2018, restrictions were dropped to Level 3 – which equates to 105 litres per person per day.

Although Gauteng has received fairly good rain over the summer season, soaring temperatures have seen dam levels drop significantly. At the time of writing, the Vaal Dam was at 74.1% compared with a 97.1% capacity at the end of February 2017. The rising mercury has been linked to El Niño, a phenomenon that causes warming of sea-surface temperatures over the equatorial Pacific Ocean and has a

direct impact on temperature, rainfall and weather patterns in other regions. This summer some South African towns and cities have seen their hottest days on record.

As we battle higher temperatures and drier climates, water becomes an even more precious commodity. South Africa is a dry country with an average rainfall of 464mm per year, compared with a



An automated greywater system redistributes bath or shower water to the garden



global average of 860mm. We all have a duty to do our part when it comes to saving water. Many households within the big metros no longer received the six kilolitres of free water every month, putting additional pressure on household expense budgets which are already tight.

Greywater can help to mitigate the pressure on fresh water and even save you money. Greywater is defined as used water from baths, showers and laundry water. André Baas, partner at Akwasolv Water Recycling Solutions, says that South Africans should consider reusing greywater as it is good water that is simply going into sewer waste. "There is still nutrient value in greywater that works well with most plants and grasses, and any excess moisture eventually filters down to the water layers under the ground surface," says André.

About 50 to 80% of water used in your home can be reused as greywater to flush toilets and water your garden. When towns and cities experience drought conditions, water restrictions kick in and using water for garden

irrigation is prohibited. This makes greywater essential for keeping plants and your lawn alive and thriving.

While greywater provides a cost-effective and efficient solution, it must be used responsibly.

"Untreated greywater should not be stored for longer than 12 to 24 hours," says André. "After this period dangerous viruses and bacterial micro-organisms can grow substantially and can present the same risk as sewer waste water. Also, ensure you are harvesting only bath, shower and bathroom hand wash basin waste."

Types of systems

There are different types of greywater systems available – consider which types suit your needs and your budget.

1. Hand

You use a bucket or hose to manually collect water from your shower, bath, bathroom hand basin or washing machine water to flush toilets or water plants. Follow all the same rules for using greywater safety. >>

Protocols for greywater

- Keep your greywater within the boundaries of your own home.
- Only utilise greywater from the bath, shower and laundry. Never use grey water from the dishwasher or kitchen sink as this will contain plant and animal fats which will damage your soil over time and form a fatty barrier that will prevent any water penetrating it.
- Should you use laundry water, ensure that the detergent is biodegradable. Most products sold in South Africa are.
- Do not use potable water irrigation systems for greywater distribution. The irrigation holes are too small for greywater and they will clog over a very short period.
- Water the garden with a sprinkler that delivers a large water droplet. The pyramid sprinkler is ideal. Fine spray sprinklers allow the water to be lost due to wind and will possibly blow into your neighbour's property.
- Do not allow your greywater to enter the storm drains. Because of the high nutrients in greywater, it is very possible to cause algae bloom in rivers and dams.
- Do not store greywater – use it immediately or at least within 12 hours. Greywater will produce an unpleasant smell if stored for anything longer than 24 hours.

Source: Mark Joubert



The Garden ResQ system can be installed in an hour by the DIY handyman using household tools. Pic: The Gardener / Die Tuinier





The Garden ResQ unit looks like a large cooler box and incorporates all fittings and a pump. Pic: The Gardener / Die Tuinier

2. Automated

Diversion systems do the collection work for you. Greywater is taken from various collection points to a small catchment chamber, with little maintenance work other than a periodic filter cleaning.

"The moment water flows from the shower, or the bathplug is pulled, water flows through an effective filter that will remove hair, lint and the odd contact

lens into the surge tank," explains Mark Joubert of the Garden ResQ DIY system. "This surge tank allows for two showers to be used simultaneously or a shower and bath. Once approximately 30 litres of water has entered the surge tank, the pump will activated automatically and redistribute the water to the garden. Once the water has been distributed, the pump switches off automatically and waits for the next load."

3. Advanced

These systems treat greywater, removing bacteria and impurities and allowing it to be stored for longer periods. Treated greywater may be used to flush toilets, for laundry, car washing and even topping up swimming pools! These more sophisticated greywater systems must be maintained and checked by specialists two to four times a year.



This commercial system recycles 12 kilolitres of water daily. Pic: Akwasolv

"These more sophisticated (and more costly) systems provide several layers of treatment, including mechanical filtration, biological degradation of the organic matter (using aeration and a bio-load of good bacteria), as well as a final water sterilisation (using UV, chemical or ozone dosing)," explains André. "The biological cleaning clears the water and the sterilisation process rids the water of any remaining bacteria and viruses. With this treated water it is safe to irrigate

gardens from above ground sprayers, as there is minimal risk of contaminated water in the air, or on the plants, grass or vegetable gardens. The other benefit is that properly treated greywater is clear and odourless, germ-free and can be stored in a reservoir." 📖

Resource

Information courtesy of Akwasolv Water Recycling Solutions (www.akwasolv.co.za); Garden ResQ (www.garden-resq.co.za)



Drought tolerant plants like rosemary cope well with greywater

Plant care

If you are using greywater for irrigation, switch to environmentally friendly, biodegradable products and avoid products that contain boron, chlorine bleach and sodium. Not all plants do well with greywater. Generally speaking, lawns will thrive with the additional nutrients found in greywater. Drought-tolerant plants cope well with greywater. Other plants like roses also will do well with greywater but require a periodic flush with fresh water. If you have fynbos in your garden you should be extra careful when utilising greywater. Detergents must not contain phosphorous as these can kill the plant.





Home insulation

With autumn around the corner and winter just beyond, we look at some easy DIY solutions for effective home insulation

>> Warren Schmidt

Geyser and pipe insulation

Home insulation is not necessarily only about keeping the living space warm and cosy, but also to ensure reduced energy consumption. Heat can be lost through the geyser and surrounding pipes. There are commercially available heating blankets for geysers and products like Isotherm are available for geysers. There is another product called Thermaflex which fits snugly around copper pipe work and can be easily cut into the required lengths.

A basic principle we all learn in the school science classroom is that hot air rises and cold air sinks. This fundamental aspect of physics is important when undertaking projects to insulate the home. In this article we explore ways to insulate your home and the products available to DIY'ers to undertake such a project. Effective insulation also means keeping the home cool during summer by preventing too much heat penetration.

A look at ceiling insulation

The roof cavity (the space between the ceiling and the roof top, typically the roof tiles) is the first port of call when insulating your house. Some calculations

have indicated that as much as 40% of ambient heat is lost through the ceiling and roof. So, by creating an insulating layer above, much heat can be retained within the room. Traditionally, Aerolite, the pink fibre blanket, was the main contender when it came to insulating the roof. However, today there are numerous products to choose from. These include Isotherm, which is free of chemicals and fibreglass, Knauf (a type of woven wool material), Granric Fleixwool, Isofoil (a combination of foil and polyester) and Alububble, as well as several others. Readers should do their homework and research each product and factor in the ease of installation as well as budget in order to make an informed decision. Some of these materials also have

excellent soundproofing qualities, so the added advantage is that it can block out outside sounds.

Other materials sometimes used include vermiculite and polystyrene beads, but ideally loose particles should be avoided. Polystyrene can be detrimental to the environment. Also, in the event that you have a ceiling collapse or break, your house can become overrun with these small particles.

Insulation and the law

Did you know that effective insulation is now part of building regulations in all new developments? The National Building Regulations (called SANS 10400-XA) deals with insulation in all new developments, including extensions to existing buildings. In short, these regulations require buildings to use energy more efficiently and take the necessary measures to become compliant. The regulations deal with insulation, glazing and water heating.

Double glazed windows

The second biggest loss to heat is the windows. Depending on the angle of the sun in relation to the windows, a room can be rapidly heated in a 'hot-house' effect but can equally lose heat rapidly at night. Double glazed windows are made up of two pieces of glass with a

small space between them, usually fixed with a desiccating strip around the perimeter to prevent moisture or condensation from occurring inside the cavity space. These windows create an effective barrier to heat loss. In addition, certain tinted varieties can prevent excessive heat from penetrating the interior during hot summer weather. Double glazed windows are also super-efficient in soundproofing.

How to install roof insulation

Most roof insulation products are available in rolled bundles, usually at a predetermined size and length. As mentioned above, before jumping to the very first product, speak to your building supplier about the range of products available. One prohibiting factor is the pitch and design of your roof. Obviously, a flat roof will present problems, as you may need to completely lift the roofing materials in order to lay down the insulation. The same applies to buildings where there is no ceiling. In these circumstances, effective insulation may be problematic. Incidentally, thatch is a natural insulator and generally retains heat quite well, so thatched roofs are generally energy efficient. However, modern thatched buildings often incorporate some form of insulation underlying the thatch. >>



Insulation and energy consumption

The harder appliances need to work the higher the energy consumption and in effect, the higher your energy bill is likely to be. While you could switch from an electric heater to a gas heater or fireplace, the more these devices need to work, the more gas or firewood you are going to consume. Therefore, effective insulation will cut down costs all round. The two main areas of insulation for the home are the roof space and windows.

Have you heard of the R-value?

R-value refers to the thermal resistance of the insulation product. When comparing products, ask the supplier about the R-value. The higher the R-value the better the insulation.



All new buildings need to comply with SANS 10400-XA, which deals with building insulation



Foam pipe insulation


Effective insulation also means keeping the home cool during summer by preventing too much heat penetration.



Effective insulation can reduce the monthly energy bill

If you have a pitched roof with workable space, then climb through the trapdoor and determine how easy it will be to install the insulation. The spacing between the roof trusses may vary according to the roof design. If heavy tiles are used, then the trusses are usually closer together than those where a lighter material is used, hence homeowners should never randomly change the roofing material without first consulting a structural engineer.

The crawl space inside a roof may not be wide enough to render the work space safe and comfortable and in some cases, it may be worthwhile employing

the services of a professional company to do the installation. Safety is vitally important when working inside the roof. Falling through the ceiling is a very real hazard and there are often numerous electrical wires in place. Although these wires and cables should be properly insulated, damage to the wiring could result in electrocution or present a future fire hazard. Almost all roofing insulation is fire-resistant, but care must be taken not to install it directly above light-fittings which may become quite hot. When undertaking a large installation, it is advisable to remove sections of the roofing tiles to allow adequate light and ventilation into the roof cavity. 



Double glazed windows are made up of two pieces of glass with a small space between them

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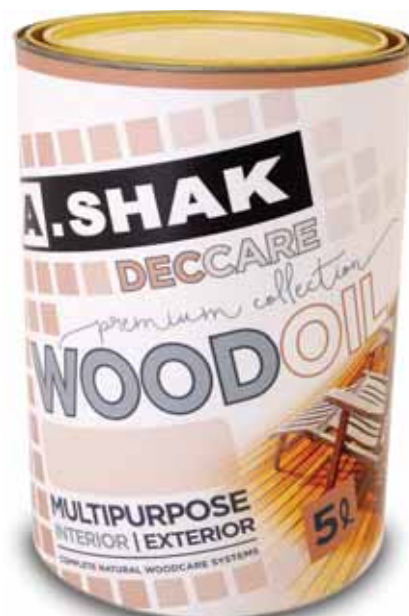
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JMC's Single Cab SWB Carrying

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>> Hannes Lindeque*

Technical specifications

Displacement:	2771cc
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The JMC Carrying is fitted with a 2.8, four cylinder, diesel charged engine and has a five speed synchromesh transmission that delivers 235nm@2300rpm and 84kw@3600rpm. JMC is supported by excellent parts and service support. The loading capacity of the SWB truck is 1.6 ton (and for the LWB 2.8 ton).

The fuel consumption for the SWB, without a load, is eight litres per 100km (12km/l) which is adequate, considering the size of the vehicle. The inside bin measurement of single cab SWB with drop sides is 1,600 x 3,050mm. With drop sides, on and off-loading is a pleasure and below the bin are tie down hooks to help you secure your load.

As this is a truck, it is slightly high when one gets into the vehicle, but it has the necessary grab handle and step to assist. On the driver's side the cabin feels a bit confined but it actually has enough leg room. The large windscreen, side windows and back window provide a clear view all around.

The steering column is between the driver's legs with the braking pedal on the right hand side of the steering wheel. The steering column is adjustable for more comfort. All the instruments are within reach and nothing is obscured. These include the rpm-counter, speedometer, trip meter, fuel- and temperature gauges.

The dashboard has many storage compartments and houses the temperature controls, CD player and two cup holders. Other standard features include foldable / adjustable passenger seats and diamond head lamps. Air conditioning and electric powered windows are optional extras.

Seating is three across with the handbrake situated between the driver and the two passengers. The gear is just in front of the hand brake. What I did

find difficult to master was getting the transmission into third gear. Without a load the vehicle easily pulls away in second gear. The maximum speed of the vehicle without a load and on level road is 120km/h.

I expected that the suspension would be hard but the JMC Carrying handled the corrugated gravel road conditions very well and provided a comfortable ride. The vacuum assisted hydraulic brake system responded immediately, sometimes too quickly. The minimum turning radius is 5.2 metres and reversing the vehicle was easy; anybody can do it.

Overall, the JMC Carrying provides cargo configuration for every project and is a well-priced workhorse to be considered. Note: JMC offers a 5 year, or 150,000km, warranty and 24-hour road assistance for four years. There is also a 3 year / 90,000km service plan available. ■

*Hannes Lindeque is the publisher of *The Home Handyman* magazine

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T's and C's apply

Essentials for DIY'ers



A rotary tool with accessories is compact and versatile

Common power tools and tips for every handyman's needs – from home improvement and repairs to getting started in woodwork



>> Kim Roberts

Every handyman who wishes to deal with basic handyman repairs and projects around the house will need equipment to tackle those tasks. The decision to use a hand tool or a power tool will depend on the job - the power required to do it and the level of accuracy needed. Generally, power tools make your life easier.

It is worth the research and the money to invest in good quality tools that will last. Other than dropping hints on what you want for birthday gifts, buy what you can afford and build your tool supply up over time as you deal with each project

you do. Before you buy, assess the types of DIY jobs you are more likely to do and this will assist in helping you to decide on the right tools to purchase. Many DIY'ers do not need wood working tools, while some handymen may be more industrious than others and require specialised tools.

Aside from manual labour hand tools, there are some tools that operate with a power source that will make your life easier. Depending on the type of tasks you need to accomplish, one can decide whether a 'plug-in' power tool will work well, or a power tool that operates with

rechargeable batteries. For heavy duty tasks, consider the corded variety. The cordless, rechargeable tool is perfect for smaller jobs, or for tasks where an electrical outlet is not accessible. Some power tools require compressed air as the power source. Invest in a good battery re-charging unit (and spare batteries) for use with battery operated tools.

Power tools run more efficiently and more powerfully than the manual versions, but have more parts that need to be maintained, and like manual tools, require beneficial storage methods to keep in good working order.

Maintenance and storage tips

- Keep tools protected from dust and moisture. Organised storage makes it quick and easy to find them when needed and protects the tools from damage.
- Keep them out of reach of small children.
- Always remove the batteries when a battery powered tool is not in use. Store the batteries at moderate temperatures to keep from overheating or freezing. Store them at a charge level of about 50%.
- After each use, check for any defects or damage.
- Remove any dirt, soil, debris or excess grease. Clean every metal surface with an approved cleaner and then dry it off completely with a cloth before storing. Spray with a lubricant metal protector, where indicated by the manufacturer.
- Preferably use shelving, drawers, storage boxes or cupboards/cabinets, depending on the size and shape of the tool and what is best in your climate.
- If your tool comes in a handy carry case, make use of it to keep the tool safe.
- Drier climates allow for tools to be hung on an organiser board. Never store tools on the ground.
- Organise tools with their discs / attachments in handy consecutive drawers.
- Use food storage containers (marriage saving tip: not your wife's containers, buy your own!) Label containers to make the tools quick and easy to find.
- A tool box makes a great storage place for a power tool that has extra fittings / bits. The extra parts (depending on the sizes) can be stored in the top compartmentalised tray, while the actual tool fits underneath in the bottom compartment.
- PVC piping can also be used for tool storage. >>



Drill driver



A jigsaw can be used to make curved cuts, straight cuts or fine detailed work in a range of materials



Random orbital sander



Power tools can be dangerous and must be used with caution. Operate the tool as per the manufacture's instruction booklet. If instructions aren't clear, call the manufacturer and ask about any training programmes they may offer. Choose the right tool for the job - injuries often occur when tools are used incorrectly or for work they were not designed for. Always check your tool for damage and wear before your use it. Always use the recommended personal protective equipment (PPE).

Before you buy, assess the types of DIY jobs you are more likely to do and this will assist in helping you to decide on the right tools to purchase.

Basic power tool list

Cordless drill / driver

A versatile battery operated tool to drill holes, drive screws into almost any material, mix paint and sand. It has a keyless chuck. There are a variety of drill bits, screwdriving bits, rotary sanders, hole saws and wire wheel brush accessories available. Batteries usually last long enough for a task and recharging takes about thirty minutes. It has three speed switches and a direction switch.

TOP TIP!

When purchasing a drill / driver test how it feels in your hand, and whether you can operate the reverse switch wearing gloves and using only one hand. Look at voltage, chuck size, battery capacity, maximum torque and torque settings.

Cordless screwdriver

A cordless drill works well for screwing and unscrewing, but a cordless screwdriver is a great choice for driving screws into threaded holes, or for lightweight, quick, small jobs. It has a fast charge time. The higher the torque of the screwdriver, the more serious projects you can tackle with comfort and the harder the material you can drive into. Look for one with a swivel head, LED lighting and a spare battery.

Angle grinder

With its abrasive, rotating discs, the angle grinder cuts through pavers, tiles, and metal bolts. Commonly used discs are metal cutting discs, mason / concrete discs and diamond discs. It is used to polish and grind and even channel out old mortar.

When purchasing, consider the size of disc, power source type, higher speed and wattage and good disc interchangeability. A soft start aids better handling and an adjustable side handle is preferable. Get one with an adjustable guard to protect you from debris.

Jigsaw

The jigsaw has an electric motor and a reciprocating saw blade. It is used for curved cuts, straight cuts or fine detailed work in a range of materials including wood, plywood, plastic, particle board, metal and ceramic tile.

When purchasing, look at its power and maximum depth of cutting, the stroke rate and the sole plate should be solid and smooth with an 'anti-slip' liner option. A top handle allows for one hand use and fixing of blades should be easy. Choose a cord length that allows free movement. A laser pointer improves accuracy.

Random orbital sander

Used for sanding with a random orbit action for that smooth finish. Sandpaper discs are attached and used and many have dust collectors. The movement range is a circular motion and back and forth motions. It is not sensitive to wood grains and it leaves no swirl marks on the project.

When purchasing your own sander consider the unit's power and speed, a dust collector and a switch that does not clog.

Rotary tool kit

An all-in-one small kit for precision cutting, polishing, etching, engraving, grinding, drilling and sharpening. It works on a variety of materials. The high speed, compact size and versatility

makes it a perfect solution to avoiding bulky power tools. Choose one which allows easy changes of accessories and attachments, has a comfortable grip and lighter weight for handling. Consider the performance and features; and range of accessories and attachments in the kit.

For woodworkers

Portable circular saw - A standard blade can be used for cutting through most materials, achieving straight, long cuts that are smooth and accurate. Different blades allow you to cut through steel, masonry and even tiles.

Compound mitre / drop saw - The blade and head can rotate at an array of angles and so is used to make quick, accurate crosscuts in a variety of pre-selected angles. It is commonly used for cutting of trim and mouldings, door frames and window castings.

Router - Mainly used in cabinetry, it is used to hollow out an area of wood, plastic, or laminates. It can cut, trim and shape. It produces finished shapes and edges, and can also cut dadoes, cut rabbit joints, do inlaying bonding and dovetails. ■

TOP TIP!

Before you buy, do research on various makes of power tools and seek advice from your local hardware store or speak to experienced friends and family who use tools on a regular basis.



Always use appropriate PPE like gloves and safety glasses when operating an angle grinder

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BACK TO

RETRO

Project guide

Difficulty: ± R1400

Skill level: Easy

Time: 2½ days (including painting)

Tools

- Forstner bit (10mm)
- Plug cutter (10mm)
- Drill and screwdriver
- Paintbrush or roller
- Optional extras: trestle table; extendable clamp

Materials

- 4 planks 1350x250mm of 22mm SupaWood
- 9 planks 260x250mm of 22mm SupaWood
- 54 chipboard screws (50mm)
- Cold wood glue and sandpaper
- A short length of scrap softwood for making 27 screw-head plugs (10mm) bar
- Four rubber-lined castors (45mm) or alternative
- Universal undercoat and paint

>> Clifford Roberts and Andries Eygelaar

It's when you shop for furniture that you come to realise style plays as much a role as the finish in determining the desirability and price of a piece. For this project, we wanted a retro shelving solution that would fit with the design of our home and accommodate books, art and trinkets.

As with any project, it pays to minimise waste. Suppliers sell certain types of material in large, set portions and it helps to keep this in mind. We opted to use SupaWood, where boards are sold in full and half-portions. The sizes provided here, completely used a half-board. We simply delivered our cutting list and collected the various sized planks from the local supplier a few days later. No mess, no fuss.

In terms of time, assembly of the piece is relatively quick. It's the drying of paint and glue that holds up the process – but patience always pays off in the end.



Once the construction is complete, sand down the sharp edges. To help with the job of getting into tight corners, we glued sanding paper to a short piece of wood



Use a pencil to mark the planks and indicate their position in the final construction

Step-by-step guide

Step 1 – Planning

Start by sketching out the project on a plan, marking the lengths and screw locations. This might seem tedious but will help you fix your objectives in mind and avoid irritating missteps. Now, once you've gathered your material, use a pencil to mark the planks according to their location in the construction. Measure and identify the location of the drill holes for the uprights and castors, and the uprights themselves, making sure your angles are square.

Step 2 – Preparation

Complete all the smaller tasks before final assembly: use the plug cutter to make nine screw head plugs from your softwood; and, lightly sand the edges of the planks to round them off.

Next, use the Forstner bit to create cavities about 3mm deep, which will eventually be used for counter sinking the screw heads and making allowance for the plugs.

Then, drill guide holes for all the screws using the following method – using a bit narrower than the screw, drill a hole

through the first plank and insert the screw. At this stage, the points of screws should only protrude slightly because you want to mark the upright with a slight indent where the guide hole extension will be drilled.

Remember to drill guide holes on the underside of the bottom shelf for the castor screws too. We placed the castors 180mm from the outside edge of the shelf; when placing them, ensure that your shelf is steady and stable. You might also consider using alternatives to castors, such as legs available from upholsterers and furniture manufacturers.

Step 3 – Assembly

Start the final assembly from the bottom up. Run a line of cold wood glue where the upright meets the plank, and screw into place. For this purpose, we were aided by using an extendable clamp, which is worth the investment if you don't have one already.

Tightening the screws between the shelves can be tricky, especially if you don't have a short screwdriver, so you might find it easier to assemble >>



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Do all the small tasks before assembly



Using an extended clamp makes the job easier



Painting is the final step, but don't rush it

each shelf as far as you can go before completing the construction.

Step 4 – Finishing

Glue the plugs in place and sand the surfaces until neat and flush with the surface of the shelf. You have less plugs than screws, because only the screw holes that are visible need to be covered.

You might want to fill in the other holes with wood filler, but it's not necessary. You're the only one who will know what they look like. Now, screw the castors into place and you're nearly there!

Once the glue is dry and the surfaces are clean, it's time to paint the undercoat. Cover the piece completely and allow to dry before embarking on the first coat of your chosen paint.

We used a non-drip, water-based enamel paint and applied it with a mini sponge-roller for the even finish we required. The shelf will take a minimum of three coats, but you'll have to judge after each has dried. Make sure there's adequate light when you make the assessment.

To make sure the surfaces are extra smooth, give the piece a light sand after every coat – except the last – is dry.

Step 5 – Placement

Wheel your new shelf into position, populate with highfalutin literature, plants and art. Take a picture and share on our *Facebook page @ TheHomeHandymanmagazine* or send in your photograph and short write-up to editorial@homehandyman.co.za 📧



The countersunk screws can be filled in with dowels cut to size or wood filler

What is SupaWood?

SupaWood is the go-to material for many woodworkers and other industries too, including framers, furniture-makers and builders. SupaWood itself is just one brand of engineered wood that is made by fixing wood fibre with a binding material under high temperature and pressure.

This type of medium density fibreboard has been in mass production since the 1980s and has proven itself as a reliable construction material with a variety of applications. It can easily be glued and painted, takes screws well and is competitively priced.

It's important to remember however, that SupaWood will be damaged if left untreated and exposed to water or high humidity. That's why any construction is almost exclusively finished off with a coat of paint or something similar.

In the workshop, take the usual precautions against dust when cutting SupaWood and be aware that formaldehyde is used in its binding material. Ideally, you want to wear a breathing guard, especially if you regularly work with the material.

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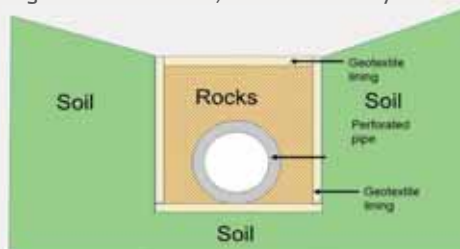
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Water, water everywhere!

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Install a French drain

French drains have been used for centuries to drain away accumulated water from difficult to drain areas. The principle is to identify your drainage line which should slope at a gentle angle away from the problem area. Next, you will need to dig a trench. The length and depth of the trench will vary depending on the circumstances and how much water needs to be drained. A trench approximately 1m deep by 1m wide is usually enough for a residential property, but in some situations a deeper trench may be required. A perforated pipe, particularly with holes on the uppermost half, is installed inside the trench. Geotextile is a permeable filter fabric that allows water to pass through but filters out soil particles that can clog the pipes. Subsurface drainage pipes can be wrapped in geotextiles to prevent them from getting blocked with soil, or trenches may be lined with the fabric. Place gravel, building rubble or chunky stone inside the hole and fill it almost to the surface. Backfill the hole with a good quality top soil and grass the area over, where applicable. Geotextile can also be placed as an additional layer before top soil and grass.



Basic design of a French drain

>> Warren Schmidt

Water is the essential ingredient to all life, but many homeowners have experienced the havoc water can bring when a pipe or geyser bursts. Rising damp and leaking roofs are another bane of the property owner caused by water infiltration. Another aspect, often overlooked or misdirected, is that of drainage. Efficient drainage of your property is essential and in recent years, news headlines have highlighted the importance of adequate drainage with the increasing intensity of flash flooding, as seen annually in suburbia of Johannesburg and Durban.

Do you have a water drainage problem? This question is not so straightforward, and you could go for years before suddenly finding yourself knee deep in water at midnight after a torrential downpour and the morning after

mopping up and submitting a hefty insurance claim. So, where to begin?

Firstly, if you have recently built or moved into a new property, now is the time to take a good look around your premises.

- Look at your roof, taking note of the surface area, pitch and gutter system and visualise where the water will flow in the event of heavy rainfall. Many developments opt for gutter-free roofs and this is very important. Gutters will channel water to downpipes and will greatly influence the areas where water could rapidly pool.
- Next, look at the patio, the position of house doors and enclosed courtyards, and even balconies if you have one. Again, where will the water drain in the event of heavy rain? Take note of all drainage holes, including the size and destined outflow. Could these drainage holes get clogged up with sand, leaves or other debris rendering them useless?
- Inspect the lawn and flower beds. Do you have any excessively moist areas or unusually green patches of grass growing more rapidly than elsewhere? This could be the cause of a leaking water pipe or the accumulation of water which can't drain away properly.
- Do you live near a wetland such as a pan, vlei, marsh, stream, dam or river? Perhaps you even have a seepage zone running right through your property?



Need to harvest rain water to top up your swimming pool? See page 49



A channel next to a flower bed directs water in the desired direction

- Determine the slope of your property and type of perimeter walls. Do you have palisade fencing or a brick wall at the lower end which could block off flowing water? Never underestimate the power of water. Many homeowners have had their hefty three metre perimeter walls bowled over after a torrential downpour of rain.

Once you have taken all the above into consideration, visualise the run-off and flow direction of water in the event of heavy rain. Will water drain away adequately out of the property or do you risk a single-track flow through the sliding door right into your living room? Water is attracted to the path of

least resistance and the pull of gravity; therefore, it will flow downhill until it reaches some form of barrier or geographical feature to contain it.

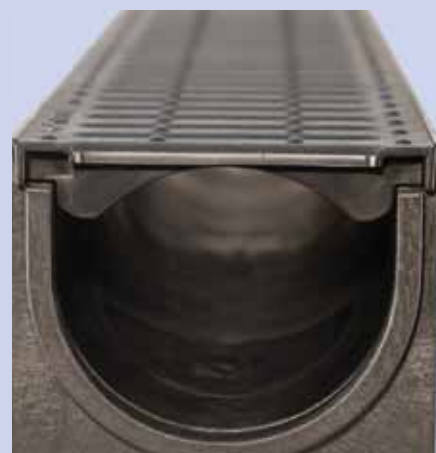
Soil as a factor

Another important consideration is the type of soil under your feet. Soil, sometimes referred to as dirt, is often a mixture of organic (leaves, compost) and inorganic (rocks, minerals) compounds. There are two basic soil profiles: heavy or light. Heavy soils have high concentrations of silt and clay and these are the types of soil that give rise to drainage problems. Light soils are generally sandy and drain easily. The >>

DIY surface drainage systems

There are several products on the market and available from most hardware and building suppliers that are designed for surface drainage. These products include grids in various sizes as well as catch-pits and funnels that allow for effective drainage. An added advantage is that they are available in different colours to match your paving or landscaping design.

Seaqual manufacture a range of durable drainage products. General manager, Tandy Calder, says that the 4All Channel Drainage System is an imported modular system manufactured in Italy and imported and distributed by Seaqual through their retail supply chain. "It's relatively simple to assemble and an experienced DIY'er should have little to no problem understanding the installation process," says Calder.





A steel grid over a drainage channel



A drainage channel leading into the neighbour's garden; always check with your neighbour where the water will run



Paving can be angled upward to divert water away from buildings or areas of poor drainage

and properties often means that water will drain away through someone else's property. Large scale developments usually take this into consideration, but make sure they are not taking shortcuts.

Drainage solutions

If you have identified a problem, it's time to solve it. In enclosed courtyards, if the drainage holes are not large enough, they may need to be enlarged or more drainage holes made. The same applies to the perimeter walls. There are several drainage products on the market specifically designed for courtyard, patio and balcony drainage (see the box '*DIY surface drainage systems*' on page 31).

Filters – consider some type of mesh or filter placed over the drainage holes to prevent them from clogging up with leaves. Also, keep gutters clear from any blockages. Construct a French drain (see the box '*Install a French drain*' on page 30) from a gutter downpipe to the area where you want the water directed to.

Small channels can be made to direct water flow around paving or flower beds (or even into a water feature such as a pond). When installing paving, consider the slope and perhaps angle edging in such a way that it directs water to where you want it. 📐

Resource

Photography & graphic by Warren Schmidt

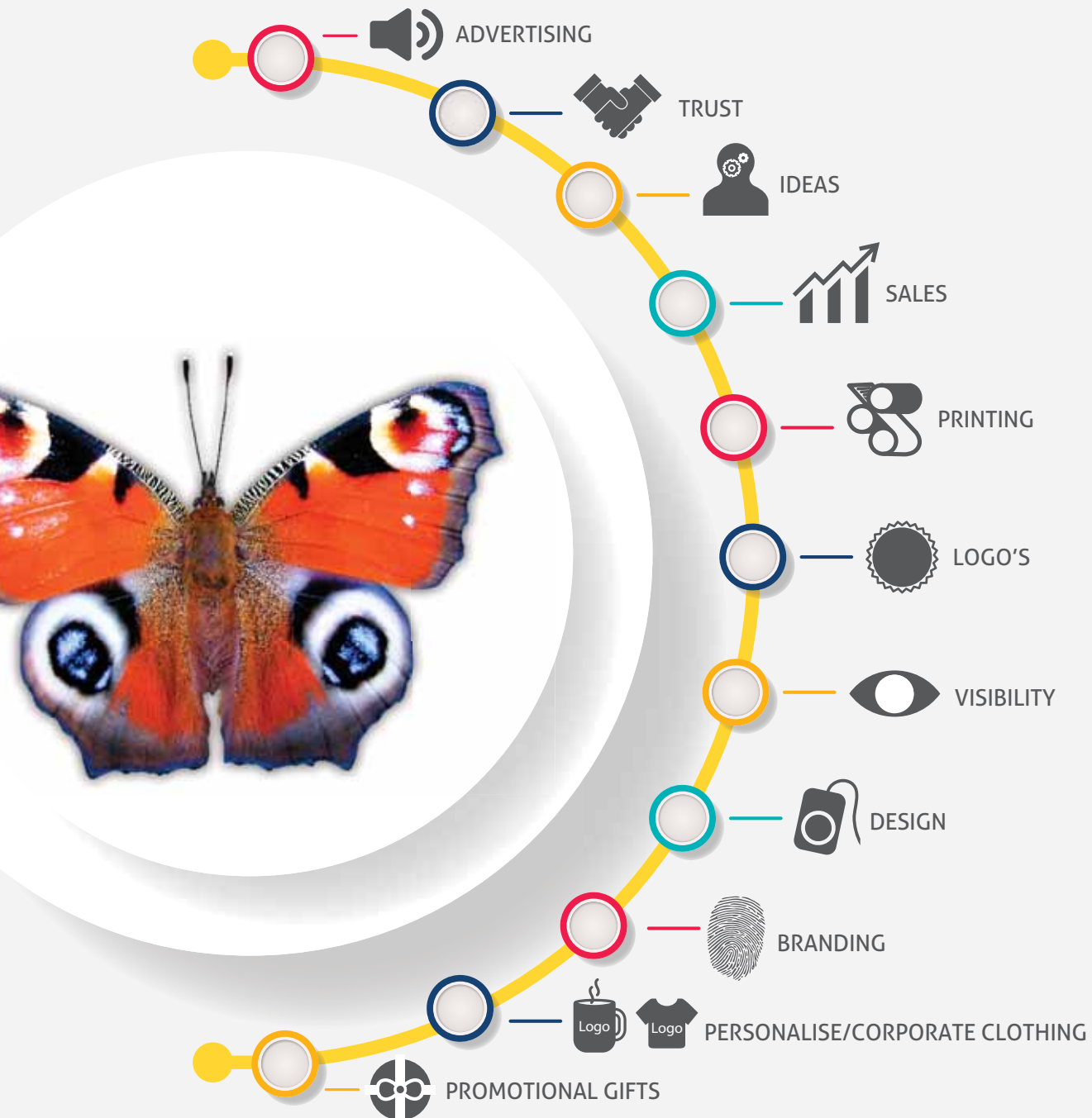
major classes of soils include gravel, sand, silt and clay. Soils in forested regions have a high organic content and soils around pans or vleis generally have a high clay content, hence the accumulation of water.

Beware thy neighbour

A common problem experienced by homeowners is when a new development takes place on an adjacent property or when your neighbour undertakes renovations to their house. All too often, drainage is not taken into consideration and the flow of water is suddenly directed straight towards your house. This can even occur when paving is installed creating a large impenetrable surface area.

If your property is slightly below the new development, you could be in trouble. Don't hesitate and take the 'wait and see' approach. Often, a financially viable solution may not be practical after the development is completed. Approach the developer (or your neighbour) and ask them what measures are in place to prevent a deluge of water coming into your property. This could also be a factor during development when a large amount of soil has been shifted, such as for excavations, and suddenly altering the course of normal drainage or water flow. Apart from water, you may end up contending with a large mudflow as well. The same principles apply when you undertake renovations. Think about your neighbours and how water runoff will affect them. The design of homes

Call for your corporate needs





Meet two facilitators of the DIY workshops at Leroy Merlin's flagship Stoneridge store

PAY IT FORWARD

>> Gina Hartoog

Bongani 'Given' Bopape and Jade Jordaan are paying it forward by passing on their DIY skills to attendees at Leroy Merlin's Stoneridge store in Greenstone. As facilitators of the workshops, Given and Jade assist and guide attendees on the various projects. Materials may be cut and ready when you get to the class, or you may be guided on how to cut materials and plan your project. 📌





Meet Given

Given grew up in Alexandra and, as the oldest son of a single mom, he was often called on to do certain tasks as his mother wasn't keen on strangers around the house. With a good eye and a passion for learning, Given took on the tasks with enthusiasm. He asked questions, visited people in the community and delved into books to gain the skills he needed. Anything from painting, tiling and plumbing... Given took on the challenge.

When an aunt needed a lock changed on one of her doors, Given was unable to source the international replacement, despite trying a number of stores. As luck would have it, he ended up at Leroy Merlin's Campus Store, a workshop and training facility which was set up two years prior to the opening of the flagship store in Greenstone.

At Campus, Given met Cédric Sennepin, Leroy Merlin's South African country leader, who offered to assist in sourcing the lock. Having seen a number of photographs of his projects on Given's phone, Cédric became interested in his work and very soon he was offered an opportunity to present workshops to customers.

"I feel that because I learned my skills from others, I should be helping others learn DIY," says Given. "I enjoy helping customers solve problems and give them ideas on how to work around these issues to complete the projects."

Given says that most of the workshops he presents at the store are built using pallets. They are easy to source and cost effective, with a myriad of different items that can be made. "And it's recycling too!" he adds.



Meet Jade

Jade was a fine art student at school, with a passion and flare for creativity. She started off doing paint effects on furniture, but soon realised that if she was able to make her own items, it would be more cost effective. Jade also came across Campus Store and soon signed up for workshops.

The first class she attended was on how to build a toy box. "I soon realised how much fun it was," says Jade. "So I joined for a full week of classes. I just loved the fact that I could make decisions on how I wanted it to look and in the end, the item became something personalised for me."

Jade was later offered an opportunity to further her DIY skills and went on to become a workshop facilitator. It was at Campus that Jade met Given, who was already facilitating workshops. The two realised that they both had a knack for passing on their knowledge and skills and that they worked well together.

"Given and I approach classes slightly differently," says Jade. "I have my materials ready and complete the project using decoupage or paint, whereas Given teaches the attendees how to plan for the project, cut materials and prepare them before starting the project but the attendees complete the finishings at home."

The pair have recently started a new initiative where on a specific day, clients can come in with their own projects and Given or Jade will assist them with any difficulties. "It's a good feeling to be able to assist," adds Given. "Jade and I work well together."



DIY workshops

10 lucky *The Home Handyman* readers can win a DIY workshop at LEROY MERLIN's Stoneridge store in Greenstone, close to Edenvale. Winners can choose to attend any workshop in the store's scheduled programme and take their items home after the class.

To enter, email: editorial@homehandyman.co.za
Please put WORKSHOP COMP in the subject line.
Please include your name, surname, physical address and a contact telephone number (office hours) in the body of the email.
Competition ends 31 March 2019. The prize does not include travel costs to Gauteng.



SIMPLE STEPS FOR STENCILLING

If you are looking for a specific stencil design and can't quite find it, you can make your own using an acetate sheet

Tools and materials

- Acetate sheets
- Art knife
- Thin paper for the drawing
- Pencil
- Ruler or tape measure
- Permanent marker
- Cutting mat (or cardboard/old telephone directory)
- Contact spray adhesive
- Sponge roller
- Clean cloth/mutton cloth

>> Catherine Reimers

In the last edition, I made handmade wallpaper. I had chosen a piece of backing board from a cabinet to demonstrate the wallpaper. Since I was going to do a stencil project, I thought the wallpaper would be a great background, which could then be framed as an artwork. For this I would need to make a customised stencil. If not on the wallpaper, then a paint technique applied directly to the wall first, can be equally effective. The surface must be properly prepared before you proceed with stencilling.

Step-by-step guide

Step 1: Draw out the design. I find the best way for symmetry is to square off the overall size and make sure you have a centre point to work from. Now one only has to draw out half the image and then trace the other half out.

Once the first half is drawn out, fold the paper along the half line with the drawing on the inside. Open up the paper and fold it along the middle line, with the drawing facing the inside. The drawing lines have almost pressed through - it looks a bit embossed. This makes it easier to trace the other half of the drawing - so go ahead and draw in the lines using a pencil.

Once complete, open up the paper to have a look at your drawing. You will probably notice that the traced half is

The final look with the gold Baroque paste

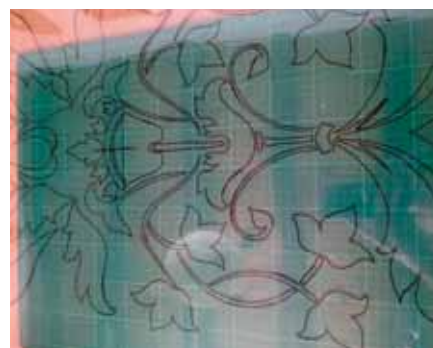
rather faint so now you'll have to draw in the design a bit more clearly and finalise the overall design.



Step 2: Trace onto the acetate. Lay the acetate over the pencil drawing and trace the design using a permanent marker.

Lay the acetate on the cutting mat and cut out the paintable areas using the art knife. You might find that there are areas in your design that once you cut them out, the entire design comes out. You will have to mark these areas before you start cutting and create joins that remain in place.

A cutting mat is great for stencils as the art knife can't cut through to your table and the mat is soft, allowing for a neater cut. Once the stencil is cut, lay it on your surface and you can now decide on colour and overall finish. >>



Step 3: Prepare your paint. I suggest you have about three colours ready. You will need a base or overall colour, then a colour for highlights and a colour for low lights.

Step 4: Place the cut stencil upside down on a drop sheet and spray with the contact adhesive. Allow it to become touch dry. It is now ready to place on the wall or board which you have prepared. The great thing about the contact spray is that it won't stick permanently and you can re-use it several times before having to spray again.



Step 5: Painting the design. There are a few ways for you to apply the paint. It really just depends on the type of finish you'd like.

If you want a solid finish, I suggest doing a few very light coats until the desired opacity is reached. This will prevent any 'bleeding' under the stencil. I like using a sponge roller with very little paint and very little pressure applied.

Then to add a bit of depth, use a shade darker and with a small piece of mutton cloth dipped in paint. I used a brush for a bit more control. Remove excess from the cloth and softly pounce down in the areas you'd like to add accents to. Once this is done, remove the stencil and leave to dry.

I decided that for my art work I wanted to add more detail so I pulled out the fine brushes and created accents with a dark colour (which gives a crisper edge and depth) and white for crisp highlights.

I then decided that since this is a more classical design, some 'Baroque art' guilders paste would add some sparkle! The Baroque paste comes in a variety of metallics and I thought some gold would finish off my piece perfectly! 🎨





Balance a ceiling fan

Is your ceiling fan flying into a frenzy or howling horribly? Follow these steps to solve the problem

Ceiling fans are practical for cooling during the hot summer and can be used effectively in place of an air-conditioning unit. If the fan isn't correctly balanced it will be run noisy and may wobble. Before attempting to find the reason for the imbalance, turn off the unit.

STEP 1

Check the blades. Dust builds up on the blades and this may lead to a slight imbalance. Dip a cloth in warm, soapy water and clean off the dust. Turn on and test. If the shaking continues, move to the next step.

STEP 2

Check the screws that attach the blades to the housing. If they are loose, wipe away any dust that may have accumulated under the blade holders and tighten any screws. Turn the fan on and monitor the movement. Move on to step 3.

STEP 3

Check the alignment of the blades. Use a flat plank, steel tape measure or dowel stick to measure the distance from the ceiling to the end of each fan blade. The distance from the ceiling to the blade should be the same for all blades. If the distance of any of the blades is longer or shorter, use gentle pressure and bend the blade slightly at the blade holder.

STEP 4

If the problem still persists, you'll have to balance the blades. You can purchase a fan balancing kit which comes with a clip and small weights. These are placed on top of the blade and held in place using double-sided tape. The exact placing of the weight is a trial-and-error process. Before attaching the tape, place the balance clip in the middle of the blade and turn on at the lowest speed. Move along until you achieve balance, then apply the tape and press the weight into place. If no result is achieved on the blade that you first selected, move to the next blade. You can also use small washers – glue them in the correct place.



BRUSH Strokes

Give an old piece of furniture a new look with a touch-up and a splash of paint

Order a back copy of our January / February 2019 issue and use homemade wallpaper to create a unique top for your chest of drawers.

TOP TIP!



Choose a water-based paint suitable for wood applications.

Water-based paints

have a low odour and are quick-drying. It's also super easy to clean up after the project and they are good for our environment.

Do you have an old chest of drawers or a forgotten wooden bedside table in your garage? You can revamp these items and make them look as good as new – for the cost of a few materials and a tin of paint.

Painted furniture is very much in fashion at the moment and if you are keen to learn new skills, you can even consider using a paint technique on your item. Why not stencil a design on the top of your chest of drawers? See page 36 for advice on how to make your own stencil design.

>> Gina Hartoog

For a good final look on your item, you must properly prepare the surface prior to painting. The goal is to remove any varnish or paint that is already applied to the wood. This makes it easier for the primer coat to adhere. Sand the item thoroughly and fill in any nicks or cracks using a good quality wood filler.

First up, inspect the item and make any necessary repairs. Check that drawers are opening and closing smoothly and that hinges are intact. What about a complete new look? Any hardware items can also be replaced. Opt for a change of handles

or knobs. Fill the old holes with wood filler and sand to a smooth finish before applying your paint.

The techniques described in this article are suitable for sentimental pieces but should never be done on antiques.

Removing an old finish

If the item has a former finish of varnish or prior coats of paint, you must remove this first before you proceed. Stripping is hard work and time consuming but a far superior finish can be achieved if you commit to the time needed in this step.

Inspect the finish on your item. If it flakes off quite easily you may be able to remove it with a sharp paint scraper. Work with the wood grain, taking care not to gouge the wood. You can also choose a water-based paint remover that is suitable for use on wood. These products are eco-friendly and you can clean up with water.

Sanding tips

Sandpaper for furniture is usually within the medium fine to very fine grit categories. An orbital sander is a useful tool when working on furniture, but you will still be able to achieve a good result by hand sanding – but with more effort on your part. When sanding by hand, use a sanding block and keep edges square.

Preparations

After sanding, inspect the piece again. Use wood filler to fill in notches, cracks or imperfections in the wood, or if you've had to repair the project using screws or nails, wood filler can be used to cover screw or nail heads. As you are going to be painting your project, ensure that you choose a product that can be overpainted. Follow the manufacturer's guidelines for applying the wood filler and allow to cure for the correct length of time. Once cured, the wood filler should be sanded flush before you commence with your paint job.

Work in a well-ventilated area and use the appropriate protective equipment. If

you are working indoors, place a drop sheet on the floor. For painting, you will need brushes and small rollers, a plastic drop sheet and paint in the colour of your choice.

Prime your item

For an even finish, consider a primer coat. Use a roller on wider areas and a paintbrush along edges and corners. Apply one coat and allow to dry, then sand with a fine sandpaper. Remove sanding dust with a cloth. For a more rustic look and if you plan to use chalk paint, you can skip this step and move straight to the first coat.

Apply the first coat

Use a foam roller and go over even surfaces first. Use a paintbrush for places you can't reach. Check that you have covered the item completely and allow to dry as per the paint manufacturer's guidelines. Once dry, you can sand with a fine grit sandpaper for a smooth finish. If you want a more distressed look on the piece, use a rougher grit sandpaper and skip the second coat.

Coat number two

Wipe down after sanding, and then apply the second coat. This will ensure good



coverage of the paint over the item. Take care on how you apply the paint. If you load the brush with too much paint, the finish will likely be streaky. Depending on the finish you require, you can consider another light sand and a third application of paint.

Final touches

You can now decide if you want to apply a clear lacquer or sealant to protect the surface of the piece. This is preferable if you want a slight sheen on the item. If you want a more matt finish or you are using chalk paint, do not apply a finish. For chalk paint, you can apply a few coats of chalk paint wax to finish off the item. ■

ASK FOR IT BY NAME

Den Braven Woodflex is an elastic sealant used to seal and fill gaps, cracks and joints where some movement capability (up to 8%) is required, on all typical woods

It is ideal for use around built-in cupboards and kitchen units, as well as for finishes on wooden flooring and skirtings. For wood projects, it can be used to fill in countersunk screw holes or cover nail heads in wood before painting. The product is fast drying, sandable and paintable once fully cured. It is also available in six wood colours.

The Woodflex range is packaged in unique transparent cartridges, making



matching and colour identification very simple. It can be applied easily using a caulking applicator, and tooling off the sealant is a breeze.

Available from hardware stores or call 011-792-3830. www.denbraven.co.za

Keep your poolside tidy with a handy caddy for drying wet towels in the sun and keeping pool noodles in place

Pretty at the POOLSIDE

>> André Gous

Project guide

Difficulty: Easy

Estimated cost: R300

Estimated time: Half a day

Tools

- Combination square
- Tape measure
- Angle finder
- Chalk
- Welder
- Cut-off saw / angle grinder

Materials

- 2 x 25 x 1.6 Sq tubing
- 6 plastic end caps 25mm
- Undercoat and paint

Handy tips for pool noodles

Did you know that pool noodles aren't only useful in the pool?

- Use a pool noodle as a tube to run water into a bucket from a basin tap.
- Cut a piece of pool noodle and glue gun it to the top of a door, as a door stop (great for kids' rooms).
- Use as a kneeling pad when you are out gardening.
- If you have a perished noodle, don't toss it out. Cut it into shapes and use as paint stamps for your children's craft projects.

- Do you keep bumping your car door against a section of your garage? Cut a section of pool noodle in half and glue it to the wall where the knock occurs. You can do the same with a length of pool noodle against the front wall, if your bumper touches it.
- Use it as a temporary doorstop. Cut two sections of pool noodle according to the width of your door and slip into an old pillow case. Slide the flat section under the door and butt the two noodles up against either side.



The summer is always an exciting time with family and friends but chaotic with wet towels, costumes and pool noodles lying around. I decided to make a stand for both, something to keep the pool area tidy for these last few months of summer.





Step-by-step guide

Step 1: Let's start by cutting two x 1.4m pieces of 25mm square tubing. Make a mark and cut with angle grinder or cut-off saw.

Step 2: Measure 800mm from the one end of the 1.4m sq tubing and make a mark. Do the same for the other piece.

Step 3: In order to create a perfect 45° bend, we need to do the following: make use of the angle finder and measure out 22,5° and do the same on other side.



TOP TIP! If you don't own an angle finder take the following steps to create the same effect: on your 800mm line, make a 10mm line on either side to create a wedge. Cut on lines with angle grinder. **Important:** do not cut through completely.

Step 4: Bend the two pieces inwards to form the 45° angle and weld in place.

Step 5: Cut two 1.2m sq tubing for the back leg.

Step 6: Measure 425mm from the bottom of the 45° leg (the long part) and place the back leg in place.

Step 7: Measure a 45° angle on top of back leg and cut out to form the 45° joint. Weld in place.

Step 8: Cut two pieces of 425mm square tubing for cross braces and weld in place 200mm from bottom of legs.

Step 9: Weld all welding spots.

Step 10: Measure four x 200mm intervals out for the cross beams on both legs.

Step 11: Cut four 850mm square tubing for cross beams and weld in place at the 200mm markings.

Step 12: Grind all welding joints neatly and spray the undercoat. Once dry, apply the final coat of paint. 🛠️



Measure two pieces of 1.4m



Cut two pieces



Measure 800mm from the bottom of the 1.4m and mark



Measure 800mm and mark



Mark 10mm on either side of the mark



Cut on the line



Do not cut through completely!



Bend inwards >>

3f



Weld in place

7



Measure 200mm from bottom

10



Weld all cross beams in place

4



End product – with the 45° angle

11



Spray your decided colour

5



Measure back leg 425mm

8



Weld cross braces in place

6



Measure again on the other leg

9



Measure intervals of 200mm for cross beam

ABOUT ANDRÉ:



After a period of unemployment, André turned his 20 year hobby into a business. He later suffered a setback when his tools were stolen but the tide turned when he won *The Home Handyman's* wine rack competition and became a regular contributor.



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Metal detectors are handy gadgets for finding anything from pirate treasure to pipes in walls



Make a metal detector

If we have a coil of wire rotating through a magnetic field, electricity is created

Tools and materials

- 1 x 9V battery
- 1 x metal detector components kit
- 1 x battery holder
- 1 x soldering iron and solder

Bot Shop sells the kit for R70 – excluding tools

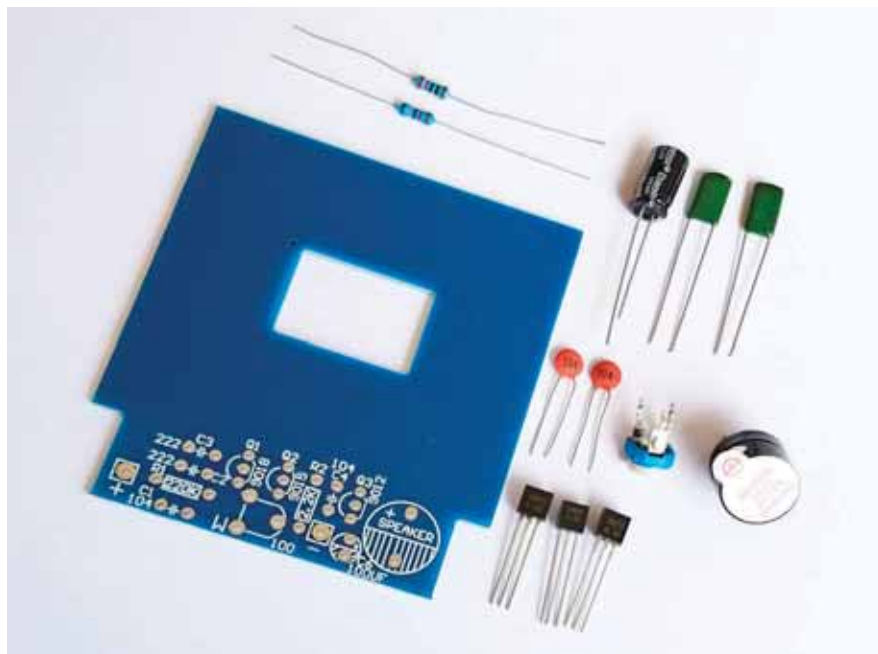
Metal detectors are handy little tools. In this project, we make a mini detector that can be placed in your toolbox or pocket. It is great for finding treasure, but for the home handyman it is even more useful to find wires or pipes in walls before you accidentally drill into something vital - causing injury and damage to yourself and your property.

Magnetism and electricity

Phenomenon 1 We can use electricity to create magnetism

>> Kin Le Roux

Have you ever created a magnet using copper wire, a nail and a battery (like those square 9V batteries)? It is a quick and simple experiment to do. Coil a copper wire around a nail and put power (using a battery) to the two ends of the copper coil. This will turn the nail into a magnet! Reuse items you have at home to make this simple project. It takes a minute or two and you can use a penlight or similar battery. The kids will love the project. More precisely this type of magnet is called an electromagnet because we use electricity to create it.

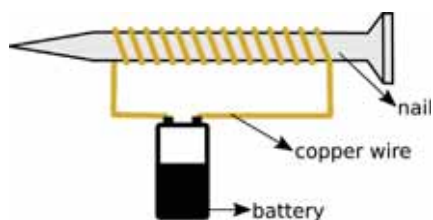


The complete project

Phenomenon 2 *We can use magnets to create electricity*

We can switch it around and use magnetism to create electricity! If we have a coil of wire rotating through a magnetic field, electricity is created. A wind turbine creates electricity in the same way - the wind turns a big coil of wire fast through a magnetised field (permanent magnets placed around the coil) that then creates electricity.

Another example is an electrical motor. A motor is built from coils of copper wire and permanent magnets connected to the sides. As electricity flows into the motors, it generates a changing magnetic field in the coil of wire that pushes against the field of a permanent magnet, making the motor spin. You can remove the power and spin the motor by hand

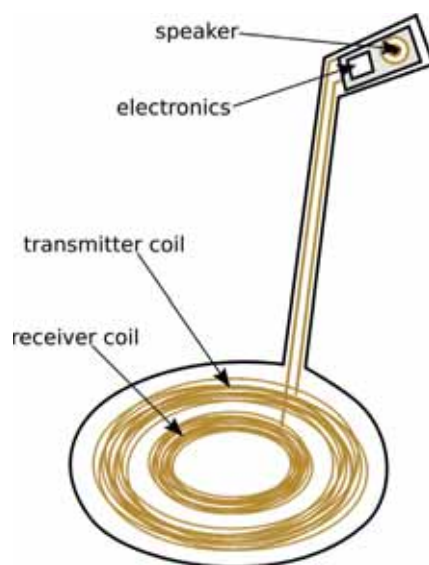


Creating magnetism

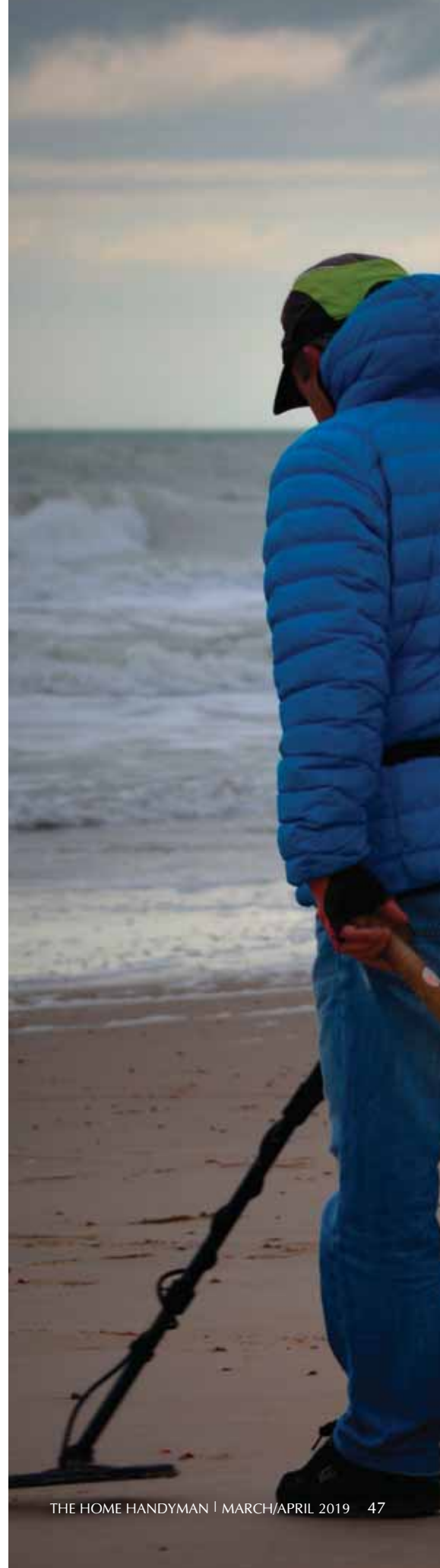
to create electricity on the poles of the motor too!

Phenomenon 3 *Turn metal into a magnet*

One last thing of importance with electricity and magnets is that if you sweep a magnet over metal or move it quickly up and down along a piece of metal, the metal becomes a magnet too! It is, however, not a permanent magnet as it will lose its magnetism over time. >>



Metal detector



Metal detectors

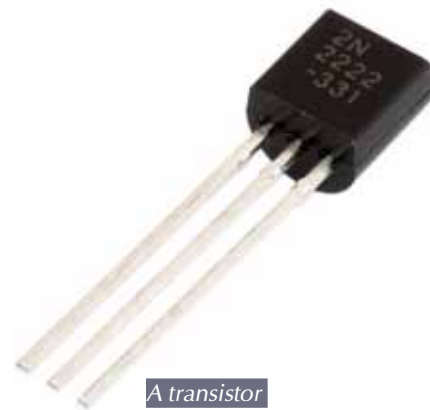
When you connect electricity to a coil via a battery, a magnetic field is formed around the coil and we call that a transmitter coil. If you sweep the coil over metal, the magnetic field penetrates right through the metal and the metal will produce a magnetic field as well, as discussed above in phenomenon three.

This magnetic field that comes from the metal is then picked up by the metal detector. The electronics of the metal detector can then make a small light go on or create a noise. In a nutshell we use a metal detector to make metal produce a magnetic field that will be picked up by the metal detector.

Magnetic fields

Picking up the magnetic field can be done in few different ways. The most common method is to have another coil which we call the pick-up or receiver coil that will produce a small amount of electricity when the magnetic field of the metal passes through it, as noted in phenomenon two.

This small amount of electricity can now be sent to some electronics that can produce, for example, a sound. A common way to produce a sound when metal is detected is with a component we used before, the 555 IC. From a previous project you will remember that the IC is used for timing. We can also produce a very fast audible pulse that



A transistor

can drive a small speaker to make the detection audible.

Another way is to use a transistor. A transistor works like a small switch; by supplying a small amount of volts, for example the volts from a coil, we can switch to a higher voltage. In this case we want to have a bigger voltage to a speaker or LED light. ▣

Step-by-step

Step 1: Clean the PC board so the soldering pads look shiny.

Step 2: Solder the components onto the supplied board by following the instructions in the diagram. The board also has the component names printed on it.

Step 3: Solder wires from the PC board to the battery connector.

Step 4: Insert the batteries and sweep something made of metal over the area of the PC board with the coils. If metal is detected, you should hear sound from the speaker.



You can create your own bigger coil if you want to be able to find metal that is located deeper underground, or very small in size.

Resource

All parts used in this project are available for purchase from Bot Shop – www.botshop.co.za



BRIGHT IDEAS

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



Cupboard on a shoestring



That built-in cupboard you want/need for the extra 'stuff' is actually an affordable option, which, if you play your cards right, can also look great. After buying my first (tiny) home, I became increasingly unsettled about how difficult it was to store and access my extra 'stuff' (tool box, etc.) Although I was flat broke, I decided to do something about it.

Here's what I did:

- 1) I swallowed my pride when a friend was renovating and I asked if I could buy the old built-in cupboards ("They're free," she said).
- 2) I asked around and made a deal – I exchanged leftover cupboard wood for transportation and a day of labour (R400) (I asked a

builder, who knew a local carpenter - always use locals, SA has plenty).

- 3) I kept the original structure – changing the design would be an additional day of labour.
- 4) DIY – I was given a small tin of varnish, bought a paintbrush (R70), removed the old door handles and painted two coats of varnish.
- 5) Finally, I spoilt myself with new doorknobs and a door handle (R140) to complete the look. Total spent: R210.

Did I get very lucky? Yes. But if you look in the right places (second-hand dealers, etc.) and ask the right people, like family, locals, builders and others, this shouldn't cost anyone more than R1000.

Chelsea Wood, e-mail

Top up your swimming pool



I notice that my pool loses so much water during the summer. Although I have a rainwater tank and harvest rain from my roof, I want to keep this water to use in the garden during dry

periods. I've made an attachment from the closest downpipe to my pool. I use a galvanised downpipe with a piece of pool cleaner hose which I direct into the pool at a slight angle. I am able to keep my pool topped up throughout the summer without using any costly municipal water. *Douglas Bailey, e-mail*



WIN!

**A Tork Craft
HSS 5-piece
wood turning chisel
set (270mm) in a
handmade wood case**

Send your bright ideas to:
editorial@homehandyman.co.za with
'Bright Ideas' in the subject line or
PO Box 24938, Gezina, 0031

Please include your name, physical address and a contact number (office hours). You may also include a photograph (300kb) of your bright idea (where applicable).

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



Congratulations to Chelsea Wood who wins a Wetstone chisel, scissors, knife and planer blade sharpener from Multi Sharp.



To order the kit for this project, e-mail info@stumped.co.za



Sweet Treat

Build a handy candy dispenser for jelly beans

>> Kimberly Snook

Project guide

Difficulty: Medium
Project cost: R210 (kit)
Estimated time: 30 minutes

Inside the kit

- One wooden hammer
- One Allen key
- Nine candy dispenser wooden parts
- One plastic jar
- One pack of hardware and fittings
- Additional item: jelly beans to fill the jar

Jelly beans are American in origin and made from sugar, starch and syrup. Historians believe that the first jelly beans were available around 1860 when families were encouraged to send the sweet treats to soldiers during the American Civil War. By the early 1900s most general stores sold jelly beans by the pound in paper bags. Today, these colourful confectioneries are popular with children throughout the world.

Step-by-step: Candy dispenser

The steps are provided for your child to follow, but please always supervise your child when they do any project.

Step 1: Ask a parent where you can do your project; you need to clear a small work area on a sturdy outside table or a work bench. Open your kit and lay out all the parts, check that you have all the parts and the fittings before starting the project.



Step 2: Assemble the candy dispenser ramp. Find the candy dispenser bottom piece and knock all six 8mm wooden dowels into the pre-drilled holes using the wooden hammer provided. Find the 'ramp' and line up the holes on the bottom with the two dowels in the middle of the first piece and knock it down with your hammer.



Step 3: Assemble the tower. Find the parts for the tower assembly; there are two square shaped sides with a step cut out on the top edge, a front "H" shaped piece, a back square shaped piece and a small square centre piece. Take the two side pieces and knock the 8mm wooden

dowels into the two holes on either side, now find the 6mm dowels and knock them into the four holes drilled into the small square centre piece. Connect the two sides with the centre piece by lining up the 6mm dowels with the 6mm holes drilled on the side pieces. Knock on the front "H" piece on to the side with the six dowels; make sure you fit the "H" with the big cut out at the bottom and the small cut out at the top. Finally, line up the four dowels with the back piece and knock it on to complete the tower.



Step 4: Attach the tower to the ramp. Line up the dowels with the holes on the bottom side of the tower and knock the tower down onto the ramp. Make sure that the ramp is facing the front of the tower before knocking it in place with your hammer.



Step 5: Position the button and the spring. Hold the spring in position in the hole on the back of the 'button' and line it up with the hole on the back piece of the tower. Once the button piece is lying

in place, push it from the front to check that the spring is correctly positioned.



Step 6: Attached the top and the bottle. Find the last piece, and place it on the top of the tower with the red lid facing up, find the four screw fixings and line them up with the holes in the tower. Attach the top by tightening the four silver screws with the black Allen key in your kit.



Step 7: Fill your plastic jar with jelly beans and screw it to the red lid. Turn the wooden dispenser upside down to screw the bottle on without all the jelly beans falling out.

Your candy dispenser is now ready to use. Just push the button and watch for your jelly beans at the bottom of the ramp. Enjoy! 🍬



Resource

For more info on the Stumped Candy Dispenser or DIY project kits available to young DIY'ers, contact 044-382-2790 or e-mail info@stumped.co.za. Facebook page: [stumped.woodentoys](https://www.facebook.com/stumped.woodentoys).

ASK OUR EXPERTS

Our panel of experts answer your questions on DIY problems

Roof tile query

WINNER



I am extremely happy to see that *The Home Handyman* is back on the shelves again. It is like welcoming back a long-lost friend.

Six years ago, I built my holiday home on Swartvlei near Sedgefield and used something called 'Resintiles' as a roof covering. These tiles were made from plastic waste and had a number of desirable features viz. light weight, resistant to algae, fungus and mildew as well as being eco-friendly.

Unfortunately, a few of the tiles have cracked due to people walking on the roof to reach the solar panels, repainting etc. The problem now is that the company that made the tiles in the Western Cape no longer exists and attempts on *Google* to locate an alternative supplier have been fruitless

except if I want to import them from Uganda where there seems to be a manufacturer. Can you perhaps help me as to where I can source these tiles or what I can do to replace them? Can I use a different material tile of the same profile? Will I be forced to replace the whole roof? To date we have been repairing the broken tiles with an epoxy bond. A lesson for me in all of this is to buy about 10% more tiles than you really need, to cover a situation like the one I have now encountered.

Frits Vleggaar, by e-mail

Danie Hattingh, regional manager at BMI Coverland and Director for ITC-SA advises: Herewith the bad news. The plastic roof tile company in question has started up about three times and has closed down

three times. They are nowhere to be found in South Africa.

How do we fix the reader's roof?

Unfortunately, it will not be possible to use any type of concrete roof tiles available in our market, as the locking sections and sizes differ compared to the plastic roof tiles. So, the reader will have to use an 'epoxy type' glue which I see he has used, to fix the broken roof tiles. If he is short of tiles, well, that will be a problem and he would eventually have to consider replacing the roof. It will be a problem when selling the house as no replacement roof tiles are available. Colours on these plastic roof tiles were very inconsistent and the quality not very good.

If you require any further advice, contact Danie on 021-492-2235 or e-mail: danie.hattingh@bmigroup.com



A compact Mac Afric multi grinder and knife sharpener (EGRINB-075) from Adendorff – ideal for sharpening chisels, drill bits, axes, scissors, knives and lawnmower blades

Send us your DIY queries and you could be a winner!

Send your queries to:

The Home Handyman DIY Queries | editorial@homehandyman.co.za or | P.O. Box 24938, Gezina, 0031

Please include your name, physical address and contact number (office hours)

Please note: Queries will only 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.



valued at R745

Our winning query comes from Frits Vleggaar who wins a Mac Afric 18V Lithium Ion cordless drill from Adendorff.

Broken cement birdbath

The pedestal that my birdbath is standing on has broken. This is a one-piece type solid cement birdbath. I also have another birdbath, with a separate pedestal and birdbath. This birdbath is the Everite type made from asbestos cement. The top broke and thankfully I have the pieces and would like to fix it. I wondered if I could use *RoofFix* to fix the asbestos cement birdbath as I have heard this is used to fix cracked cement roof tiles?

I also have a marble angel statue which has great sentimental value, however, the head broke off and although we tried using some adhesive to fix it, it did not last. Can you advise what products can be used to fix the marble angel and the birdbaths?

Margaret Warner, e-mail query

Brian Bennett Technical Advisor at A.Shak replies: With regards to the solid cement birdbath and the marble angel statue you can use our brand new product *DoubleBubble* which is 3G Sachet Bonding Adhesive Kit consisting of a two part epoxy and urethane adhesive. It is available in small quantities and this makes it suitable and cost effective for fixing small objects.

RoofFix as you correctly mention can be used successfully to fix your broken asbestos cement birdbath.

For further advice or information contact 011-822-2320 or e-mail: brian@ashak.co.za



Painting ceramic tiles

We want a new fresh look in our kitchen but do not want the expense or mess that goes with removing the tiles and grout so I need advice on a DIY paint system that can be used to paint over the existing glazed ceramic tiles. I have seen this done in a magazine and it looks amazing.

Pearl Erasmus, e-mail query

Cindy Engels from A.Shak advises: Painting ceramic tiles is an extremely easy and cost-effective way of updating the look of both kitchens and bathrooms. We have

a product called 'Tileprime' for this exact application.

To prepare the surface, fill in any cracks or broken grouting with an appropriate filler. Clean the surface thoroughly with a water-based cleaning agent. Take care to remove all traces of mildew on the tiles and grouting.

Apply an even coat of 'Tileprime' over the tiles using either a brush or roller. Leave the primer to dry for 24 hours before applying the paint coat.

Either an enamel or PVA paint can be used.

Enamel paint will give a much higher sheen finish. If you are overcoating with an enamel paint, the solvent in the paint will soften the primer slightly.

Take care not to bump or scratch the newly painted surface for at least 24 hours to allow the coatings to cure adequately.

For further information contact 011-822-2320





Router tables

If you are ready to own a router table, you are ready to build your own

>> Denis Lock

The router is the tool that has had the greatest impact on both DIY and professional woodworking. It does, however, have some problems. It is an inherently unstable machine: most of the time less than half of the base is supported. Dust control is a problem; dragging a vacuum hose behind a moving router is not easy. It is difficult to secure small workpieces while they are being routed with a hand-held machine. Mounting the router underneath a table helps solve these problems. In his book *Woodworking with the Router*, Bill Hylton has this to say: "Of all the accessories made to use with a router, the router table is the most useful. It turns the portable router into a precision stationary machine."

The router table was not invented by one of the big woodworking machine manufacturers. It evolved as a shop improvised tool. Woodworkers, frustrated with some of the shortcomings of a hand-held router, mounted their router in an inverted position under some

sort of a table. History (as far as I can determine) does not tell us who was the first woodworker to do this.

The idea took off and industry came to the party offering more powerful machines, half-inch collets and half-inch shank bits. A number of woodwork machine manufacturers started marketing router tables. I maintain that many commercial router tables are over-designed. Perhaps the marketing strategy is 'let's add features that the average woodworker can't build themselves and then they will buy our table'. I see too many machines and accessories that are unnecessarily complex. The KISS (keep it simple, stupid) principle has been forgotten.

By the time a woodworker is ready to use a router table they are ready to build their own. There are lots of plans (many of them free) on the internet. Unfortunately, many of them try to copy the unnecessary complexity. I have been using a table router for forty years. I have

been building and selling router tables and accessories for ten years. Let me share my design ideas with you.

There are many router table variants - floor standing, bench top models, table saw extension wing mounts, clamped to a Workmate or a folding top hinged to a workshop wall. The choice is driven by space availability, intended use and financial considerations. Regardless of approach a router table consists of three main components: a stand, a top and a fence.

Router table stand

The stand can be a simple open stand with wooden or metal legs or an elaborate cabinet with drawers and doors. The important thing is that the stand is sturdy. A stand can take up to half a square metre of floor space. A cabinet reclaims this workshop real estate and provides useful storage for router bits and accessories. Photo 1 shows my router table. This design has

1



My router table

been copied by a number of my students: photo 2 is a cabinet made from chipboard with hardwood edging. This one has lockable castors. Photo 3 shows a simple bench top stand made mostly from 16mm MDF and 16mm chipboard.

Router table top

This is the most important component. There are basically two types of

router table tops. The first is a direct-mounting top where the router is permanently attached to the underside of the top (photo 4). The second uses a drop-in mounting plate to which the router is attached (photo 5 – for a Bosch router). An opening the same size as the plate is cut into the table top. The mounting plate, made of plastic or metal, is between 6mm and 9mm thick and roughly 235mm by 300mm in size. A drop-in or insert >>

2



Stand with castors

3



Bench top router table

4



Permanently mounted router

5



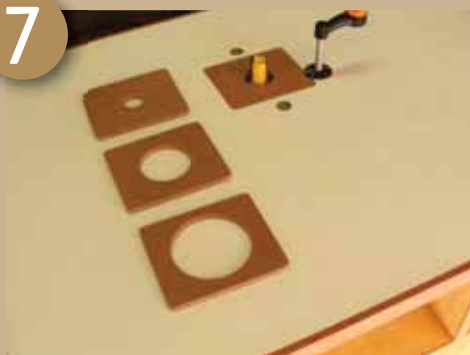
Drop-in plate for a Bosch router

6



Bracing to prevent sagging

7



Reducing rings

8



Fence bit guard

9

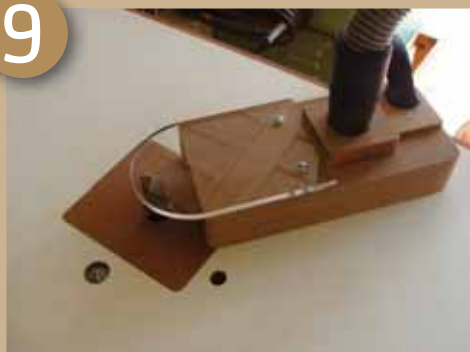


Table bit guard

10



Lots of C-clamps



plate is used on commercial router tables as these must cater for a variety of router makes and models. The direct mounting is used on shop-built router tables made for a specific router dedicated to table use.

Regardless of type or size a router table top must be flat and smooth. A slight crown is acceptable. A dip is totally unacceptable: it results in inaccurate and inconsistent cuts. The weight of a router (24 hours a day, 7 days a week) plus the downward pressure when working puts a router table under a lot of stress. A cut out for an insert plate and mitre gauge and T-track slots weaken a router table top. Bracing (photo 6) is a must for tops made of laminate covered MDF. I believe that a mitre gauge slot is totally unnecessary. Use of a mitre gauge for short end-grain cuts requires that the fence be set parallel to the mitre gauge slot. A simple sled that rides against the fence, regardless of the fence orientation, is a simple and elegant solution. It negates the need for a mitre gauge slot and avoids the complexity of setting the fence parallel to this slot.

Router bits range in diameter from 3mm (a veining bit) to 90mm (a panel raising bit). The top or insert plate needs to accept the large panel raising

bits. Safety considerations dictate that there must be a way of reducing this large opening when using smaller diameter bits. Click-fit or press-fit reducing rings (photo 7) provide the answer. It is important that these rings (and the insert plate, if used) are flush with the table top. A mismatch can interfere with the feeding of the workpiece and cause a “dwell” mark.

Many router tables position the router in the dead centre of the top. This wastes part of the top. I prefer a two-thirds / one-third front-to-back location.

When using a fence the bit is often buried in the fence and only a small cutting edge is exposed. Cutting a groove, for example, exposes the full diameter of the bit and the use of a bit guard (photo 8) attached to the fence is advised. When using a bearing on a bit as the guidance method (pattern routing and profiling curved edges) the fence is removed. A bit guard that attaches to the router table top is needed in this situation. The bit guard shown in photo 9 (ignore the reflections) serves three purposes: a bit guard, a dust extraction port and a starting fulcrum.

The simplest way of attaching stops, guards, auxiliary fences and



horizontal feather boards is by clamping them to the edge of the top. One of my pet gripes is that the manufacturers of machine tables (be they for a table saw, a bandsaw or a router table) don't take this into account. My router tables are made with a 65mm overhang around the entire periphery. Using C-clamps I can clamp the important items just mentioned around the entire outside edge of my table. Photo 10 shows my finger joint cutting set-up: seven C-clamps are used. I know of at least two commercial tables that won't let you use one C-clamp.

Router table fence

A fence is the most used guidance system and should meet the 4S criteria:

- Straight: perfectly straight along its length
- Square: perpendicular to the surface of the table top (photo 11)
- Sturdy: you should be able to attach a 300mm high auxiliary fence for

vertical work and not experience any flexing (photo 12)

- Safe: the opening on each side of the bit can be reduced to a minimum (photo 13)

A good fence should provide for the simple attachment of safety accessories such as feather boards, stops and a see-through bit guard (photo 14). A lot of dust can be created when table routing. Provision for the connection of a dust extraction hose is a must.

If you have already built a router table I would love to see a photo of it. If you are planning to build a router table, I would be happy to answer your questions. 📧

ABOUT DENIS:



Denis Lock runs a woodworking school and shop in Midrand, Gauteng. He can be contacted at lock@worldonline.co.za or 082-267-5948. Visit his website at www.routingwithdenis.co.za
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11



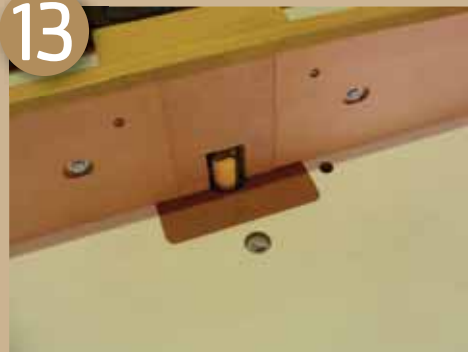
Fence square to table

12



Tall fence – no flexing

13



Minimum opening around bit

14



Feather boards and bit guard

WOODWORKER'S CORNER

Sharing techniques, ideas and a love of wood

Top tool review

Tork Craft's new powerful 12-volt cordless oscillating power tool is on par with some of the best, when it comes to features and technology. There are several different oscillating brands available today, some complicated with time consuming tools required to change the heads. Like all the top brands in this category, the new Tork Craft oscillating power tool (TCOT001) requires no tool for the changes as it has a quick change arbor hand-locking set up. The universal arbor fits most blade types and tool head accessories and Tork Craft have a

comprehensive range of optional head cutters, scrapers and sanders to cut, shape and clean up all types of material.

The TCOT001 has been modelled and designed from some of the best oscillating brands in the world, offering a first-class tool. Visit the website www.torkcraft.com to view various blades and tool heads that are available and their uses.

Specifications:

12-volt cordless unit; 6 speed settings; revs from 5,000 to 15,000rpm; handy

battery level indicator; long-lasting Li-Ion battery; ultra-fast charger; sample blades and heads; an HSS steel cutter; a high tensile steel scraper; a sanding pad and three different sanding grits.

For more information, contact, Vermont Sales on 011-314-7711 or visit their web site www.vermontsales.co.za



Ash (*Fraxinus* species)

>> Stephanie Dyer

According to Hugh Glen and Braam van Wyk's book on trees introduced into South Africa, (published in 2016), there are five different ash (*Fraxinus*) species grown here, mainly for ornamental purposes. The natural distribution of the genus *Fraxinus*, which contains 45 to 65 different species, is Europe, Asia and North America.

Ash trees are large and mostly deciduous. Apart from being useful timber trees, the leaves are browsed by cattle, goats and rabbits. The imported ash timber available to South African woodworkers, consists mainly of two species, *Fraxinus americana* (American ash) and *F. excelsior* (European ash). The wood of these two species is quite similar in appearance and properties. The heartwood is straw-coloured to light brown and the sapwood is white. The colour and the medium to coarse texture

of the wood, resembles that of certain oak (*Quercus*) species. The grain of ash is usually straight and even, although boards with curly and figured grain may sometimes be found.

The wood is of medium density (about 670 kg/m³ for American ash and 710 kg/m³ for European ash) and has good strength and elasticity. It also has good steam bending properties. Ash is known for its excellent shock resistance, making it the preferred wood for striking tool handles, like axes and hammers and sports equipment, like baseball bats, hurleys and oars. Other uses include counter tops, cabinetry and interior furniture. The attractiveness and flexibility of the wood make it an ideal choice for staircases and handrails. It is often used for electric guitar bodies due to its bright, cutting tone and sustaining quality. Ash veneers are popular for office furniture. The wood is classified as non-durable and



perishable and will require preservative treatment for certain applications.

Woodworking properties include good machining and finishing qualities. It saws well by hand or machine, with a moderate blunting effect on tools. The wood planes to a smooth finish. Screwing and glueing properties are good, but it may split in nailing. It stains and polishes well.

On the downside, it has been reported that there is a reduction in the supply of healthy trees, especially in Europe, which makes ash an increasingly expensive option to use.

Woodworking associations

The Witwatersrand Woodworkers Association (WWA) is the only South African woodworking club that has a comprehensive range of woodturning and woodworking machines. This year the Association plans to hold regular Saturday morning meetings to cover issues members may have, work on projects and run training courses.

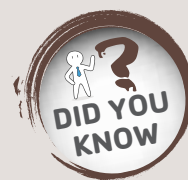
The Woodturners and Woodworkers meetings are club meetings and live demonstrations are presented to members. The Toymakers and Friday Workshop meetings are hands-on workshops. Friday Workshop members work on various projects, prepare wood for projects to be completed at home and assist each other to solve woodworking problems. A number of WWA members also offer various woodworking courses.

During the course of the year members make toys at the Toymakers Meetings

and at home. The Association hosts an annual function at the end of November each year to hand over the toys to their nominated charities. This year they hope to donate in excess of 1000 toys. In addition to handing over the toys, they raffle power and hand tools, workshop items and consumables like glue, sandpaper and the like for Association funds.

For more information, visit the website: www.wwa.org.za or call the chairman, Herman Potgieter on 083-631-0501 or vice chairman Alistair Brande on 079-895-8709.

Woodworking associations' details are available on our website at www.homehandyman.co.za. To add your club details or provide details for many upcoming events for us to publish on this page, please email details to editorial@homehandyman.co.za



Why do gum poles only rot in the centre?

>> Denis Lock

You may have noticed that gum poles only rot in the centre. It is as if somebody has taken a large auger and drilled out the pole's centre. As the girth of a gum tree (*Eucalyptus saligna*) increases the sapwood cells close to the centre die (stop conducting sap) and change to heartwood cells. This change is accompanied by the deposit of a variety of organic compounds, called extractives, in the heartwood cell's walls. Extractives reduce the permeability and make it difficult or impossible to impregnate the heartwood with chemical preservatives. The sapwood is preserved, the heartwood is not and eventually rots away.



WOODWORKER'S SHOWCASE

Showcase your woodwork projects

Denis Lock shares his best projects

Denis Lock has worked with wood for 69 years. It all started as a pre-teen when a serious fall in the gymnasium resulted in a badly fractured right forearm. His orthopaedic surgeon suggested fretwork as part of his rehabilitation program. While at high school, Denis ran a woodworking business making and selling toys, novelties and small furniture items. Denis continued woodworking through 50 years of employment in the mining and computer

industries. After retirement he turned his serious hobby into a pension-augmenting business.

Denis continues his woodworking today as a practitioner, teacher, author and consultant. The braai trolley featured in the November / December 2018 issue of *The Home Handyman* is his latest piece of handiwork.

Photos copyright DN Lock - 2019

... these are a few of my favourite things



Garden trellis and mirror



My son's kitchen in cherry



Arched doorway and door made of kiaat



Three generations of children have enjoyed this cart and blocks



My son's 10-seater dining room table. Made from quarter-sawn Sapele mahogany



Side table in oak. Look at those medullary rays!

Write to us

Please send us pictures of your project.

Write a caption with your name, surname, inspiration, type of wood, etc. and send to editorial@homehandyman.co.za



COFFEE CORNER

From our workshop to yours

Meet the team

Wilma Lindeque publishes *The Home Handyman* magazine with her husband, Hannes. She is also involved in advertising sales for the magazine.

Tell us a little about your career

I'm actually a qualified science and biology teacher, with some maths experience as well. After our wedding, I had to leave my permanent teaching position and go to Pretoria where my husband, Hannes, started working as an estimator at a printing company. Before long, the price estimating bug bit and I started working with him. I later asked management if I could move into client liaison where I could work with people and advise them of the best printing options they have – see, typical teacher instinct! I enjoyed it so much that, in 1999 I decided to take the big step and become my own boss - and I established BB Print. Initially, I did only printing, but later Hannes and I published the *VeldFokus* coffee table book for the SABC and also started a



niche fishing magazine, *SA BASS*, in 2001. I was responsible for advertising sales and Hannes looked after all other aspects as a publisher. In 2017 we heard that *The Home Handyman* was up for sale after the previous publisher retired. We are not sorry for taking the exciting step to publish a DIY magazine.

What are your hobbies?

I do not have a lot of time for hobbies, but I enjoy reading and will

occasionally do decoupage - I believe in personal gifts and rather prefer making something for someone, than to buy something impersonal. We do not have a television, so watching movies with our children on our projector and home-made big screen is a fun pastime. I also enjoy spoiling my guests with my cooking and baking skills. I also like DIY projects in and around the house – like my dressing table made from cement garden furniture which I painted with antique crackle black and gold paint.

How do you find working on THH?

We are blessed with an incredible *The Home Handyman* team, and it's just a pleasure to work with them. In addition, I must include the readers who made us feel welcome from the start in this new market we entered so suddenly. Thank you THH team and thank you to every reader and advertiser - you made us feel at home...

Home hacks for busy DIY'ers

- Painting? For an easy clean-up, place a plastic bag inside your paint tray and pour the paint onto the plastic. If you are painting directly from the tin, place an elastic band over the length of the tin (through the opening). Use the elastic band to clean your brush and keep the paint away from the edges of the tin.
- Place a paper clip on the edge of duct tape or sticky tape to avoid losing the end.
- If your garden hose springs a leak, don't stress! Just make a temporary fix. Pop a toothpick in the hole to plug it, then snap it off flush with the surface of the hose. Tape it closed with insulation tape. Cover about 40 to 50mm on either side of the hole.
- Before climbing an extension ladder, jump lightly on the bottom rung to ensure that it is firm and stable.

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KNOW YOUR H²O

Clean drinking water is essential for a healthy body and mind

>> Gina Hartoog



If you are drinking at least six to eight standard glasses of water every day, you're probably on track to keeping your body properly hydrated. Researchers state that even if your body is just a little dehydrated, you'll feel the effects both mentally and physically.

If you choose to drink bottled water, take note of the packaging - polyethylene terephthalate (PET) bottles. Bottles should be handed in for plastic recycling. Opt for bottles that are bisphenol A (BPA) free. BPA can leach into the liquid if it is exposed to high temperatures. ■

About RO

Reverse osmosis (RO) is a type of filtration system used to remove dissolved inorganic solids from the water. High pressure is used to push water through a semi-permeable reverse osmosis membrane. Only pure water is allowed through. All particles and other impurities larger than 0.001 micron will be removed. RO removes most contaminants from the water – from bacteria and viruses, to nitrates, fluoride and heavy metals. The final stage of the process is a post filter which adds minerals to the water for a more pleasant taste and good health. One negative aspect of RO filtration is that for every five litres of water that passes through a RO filter, about three litres are discarded.

What are the different types of drinking water?

1. **Tap water** is piped into our homes and South Africa's municipal water is considered safe to drink. Water is sourced from catchment areas (rain water) and underground sources and piped to a treatment facility where it undergoes a cleaning process to purify the water. Chlorine and other chemicals are added to kill harmful bacteria and viruses. Households may use tap water for anything from cooking and washing clothing to irrigation and topping up a swimming pool. Water restrictions and rising water costs are forcing consumers to look at harvesting rain water for irrigation or reusing greywater.
2. **Filtered water** is tap water that is further filtered to remove any remaining impurities or unwanted minerals from the water. The water passes through various filter layers to reduce impurities and remove the taste and smell of chlorine. The process of reverse osmosis or carbon filters may be used in the filtration process. You can buy bottled filtered water, sold as 'prepared water' or use a point-of-use (POU) filtration system to filter your cooking and drinking water at home.
3. **Mineral water** is extracted from underground sources and contains minerals like magnesium, calcium, sodium, potassium and others. The water undergoes very little treatment before bottling. Mineral water contains a high level of Total Dissolved Solids (TDS) in the water. The water may be still or carbonated. Brands often have a unique taste, based on the location of the water source.
4. **Spring water** comes from an underground water source but reaches the surface naturally via a spring. The water is filtered to remove impurities before it is bottled. Minerals are not removed and spring water contains calcium, sodium, bicarbonate, magnesium and potassium. The water may be still or carbonated.

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Screw it, let's DIY!

About Annalien:



Annalien started her career at the *SABC* on *50/50* before moving to Germany after she met her husband. Later, they returned to South Africa and she took on various working freelance projects, eventually getting hooked on DIY. Annalien is part of the team on *The Home Channel's Get It Done!* series.

Being a mother of a third-year student who is bored out of his mind during his study break can be tricky... He has all these weird and wonderful ideas to keep himself from studying and in some way or another it always involves me. This time it involved my skills as a DIY enthusiast and so my pride was put to the test.

Let me start from the beginning... My son moved into a new apartment and needed some furniture, but as a student he couldn't afford what he liked and needed. So being the 'DIY lady on television' I was immediately the answer to all his problems.

Well that caused a huge problem for me as we were in the midst of filming regularly and therefore the tools and my garage (which acted as our studio) had to be in immaculate order. Being middle age, also didn't help as I have to

When a son calls on his mom for help, bring out the power tools and let's get the job done

work sparingly with my energy levels. I am sure other people my age will clearly understand. When filming you have to concentrate on not talking nonsense, look like you know exactly what you are doing and work with the tools in dust and heat - and still look presentable. This all can be draining, but when your firstborn cries for help, duty calls and its mom to the rescue!

A flat screen television stand is the first request and the picture is presented to me with great excitement and expectation. As a hopeless optimist I didn't see any difficulties with it and responded with self-confidence: let's get it done! It also looked like a 'one day project' exactly as Peter, my co-presenter and expert, will make it when filming.

Standing there looking at the shapeless heap of materials, I already started feeling a bit apprehensive, but looking at my son's excited face, I realised that I had to 'man' up.

After only two hours I came to the conclusion that this is definitely not a

>> Annalien Grensemann

one day job, my back and knees were hurting and boy, was I grumpy. Then my son made a joke and we soon were laughing together from our stomachs.

Later, as I looked out of the window to where he was busy sanding the wooden boards, I realised that my son had grown into a young man full of life. When his hands stroked the wood, I can see how proud he was of his handy work.

The three days of building the piece of furniture became a new bonding experience between mom and son. He got to know his mother as the fast and furious screwdriving woman and I saw my son for the first time as an analytical problem solver.

The joy and pride on my son's face when he looked at the finished product was priceless. In the meantime he has moved to London and this television stand is now in my house. It's not just a piece of furniture anymore, but a physical image of memories, laughter and serious discussions about life. So, my conclusion when you need to decide to buy or DIY... screw it and DIY! 🛠️





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