

DIARY DATES

MAY 2010

THE INSTALLER'S CHOICE

Exhibitions

Over the next few months you can visit the Worcester stand at any one of the following exhibitions, where a selection of our latest 'A' rated gas and oil-fired boilers and renewable technologies will be on display.

For further information visit www.worcester-bosch.co.uk and click on the events page.

May 2010

All Energy – Aberdeen Exhibition Centre

19/05/2010 – 20/05/2010

Greenbuild – Manchester Central

26/05/2010 – 27/05/2010

June 2010

Royal Cornwall Show

Royal Cornwall Showground,
Wadebridge

10/06/2010 – 12/06/2010

CIH – Harrogate

22/06/2010 – 24/06/2010

The Southern Homebuilding & Renovating Show Sandown Park, Surrey

26/06/2010 – 27/06/2010

July 2010

The Great Yorkshire Show

Great Yorkshire Showground, Harrogate
13/07/2010 – 15/07/2010

Royal Welsh Show – Royal Welsh Showground, Builth Wells

19/07/2010 – 22/07/2010

Penrith County Show – The Showground, Penrith

24/07/2010

New Forest County Show – The Showground, Brockenhurst

27/07/2010 – 29/07/2010

Keep up-to-date with the daily goings on
at Worcester, Bosch Group by following
us on Twitter and Facebook



[Twitter.com/heatingyourhome](https://twitter.com/heatingyourhome)



[Facebook.com](https://www.facebook.com/Worcester-Bosch-Group) and search for
Worcester-Bosch-Group

Worcester set to provide
complete heating solution
with Greenfloor UFH

40th Anniversary of the
Combi boiler – final part

Added Value Services
from Worcester

FSC POSITION



We have an eye for quality and reliability.

Our obsession with quality has been rewarded, as independent tests have shown that Worcester boilers are now the most reliable on the market.

- Over 100 people employed in quality control at Worcester
- Boilers go through 5 rigorous tests during production
- Components are continually tested and checked throughout production
- Every completed boiler is filled, fired and put through full functional tests.

To find out more, call 0844 892 3366 or visit our website.



www.worcester-bosch.co.uk

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Welcome from Steve Lister

Welcome to the May 2010 edition of Installer's Choice. For those of you that I haven't met, I am Worcester's Sales Director and I'll have the pleasure of welcoming you at the start of each Installer's Choice magazine from this month onwards. We enjoy putting this magazine together and aim to keep you up to date with all current news so if there's anything you'd like to see in future editions, please get in touch.

In this month's issue, we unveil details of our new Greenfloor underfloor heating product, due to launch later this year, which means Worcester can offer all parts of the complete heating solution for domestic installations. We also have an update on some of our new solar

accessories and MVHR (mechanical ventilation and heat recovery) system, which are also being launched very soon.

Martyn Bridges completes the fourth and final part of our story on 'the rise of the combi boiler' and also details some of the latest legislative changes in the Building Regulations.

On page eight we welcome Ian Kenny, of Graham plumbers merchants, as our guest contributor.

We hope you enjoy the magazine.

Steve Lister
Sales Director
Worcester, Bosch Group

New Solar accessories from Worcester



Since its introduction in 2005, the Worcester GreenSkies solar range has gone from strength to strength. Now we're offering GreenSkies installers even more flexibility and choice with the addition of 3 new solar pump stations and 2 solar controllers.

GreenSkies Solar Pump Stations

The new pump stations are available as single or dual line options and are suitable for use with between 1 and 10 collector panels. One of the dual line stations is also available with an integrated solar controller.

Key Features:

- Single and dual line stations can be combined for applications with a second user or second collector field
- Pre-assembled components make installation quicker and easier
- Stations can be used for East/West facing roof configurations
- Integrated air vent eliminates the need for an air vent on the roof
- At a glance, indication of temperatures on the roof and within the cylinder.

GreenSkies Solar Controllers

The new solar controllers are designed to provide comprehensive, yet easy to operate programming and feature clear visual feedback on the operation of the GreenSkies solar system.

The TDS100 controller is designed for solar systems with one user and can be pre-assembled into the fascia of the pump station or wall mounted. The TDS100 comes with 3 NTC inputs.

The TDS300 is multi-function controller, which is designed for use with a second user or second collector field, has a full text menu with 27 different pre-configured systems and comes with 8 NTC inputs.

Key Features:

- Temperature difference control
- Adjustable maximum temperature limit of storage and collector
- Variable speed control of pump
- Adjustable minimum pump speed.

MCS made easy!

The Microgeneration Certification Scheme or MCS was set up to assist homeowners who want to install renewable technologies in their home. There are two sections to MCS, one is the accreditation of domestic renewable products, which manufacturers are awarded if their products meet the standards set out within the scheme and the second section is to recognise fully qualified, high quality installers who can fit the products.

The benefit of installing MCS accredited products, under which all of Worcester's renewable heating technologies are approved and using an MCS accredited installer is that it allows the homeowner access to Government funding via the Low Carbon Buildings Programme (LCBP) to install these products, reducing the cost to the consumer.

In principle, Worcester supports the requirement for an "over arching" scheme for this type of technology. However, we recognise that the way the scheme is currently structured, actually makes it very difficult for installers to become accredited. We are now helping to make this process easier and have set up a special area on our website to help guide you through the process. We are also introducing training to support this.

To find out more, visit www.worcester-bosch.co.uk/MCS

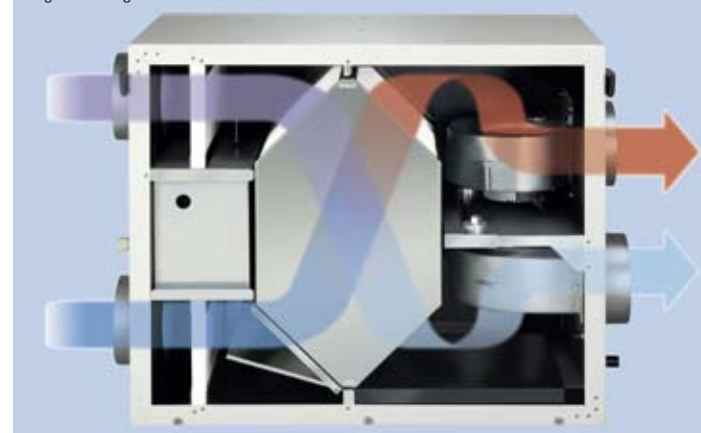
Worcester to launch MVHR

Worcester, Bosch Group is set to take another step forward with its product portfolio development by introducing a highly efficient, high quality mechanical ventilation and heat recovery (MVHR) system to the UK market this summer.

Worcester's new products will be known as Greenstream MVHR and will be available in three different models. The small unit will operate to 200 cubic metres per hour, the medium will be 300 cubic metres per hour and the large will be 400 cubic metres per hour.

In October this year further changes to the Building Regulations will require new homes to have an increased level of air tightness. As new requirements are enforced at local or national levels, new build private homes will have to meet level 3 of the Code for Sustainable Homes, or at least elements of it, which could result in air tightness of typically 5 cubic metres per hour, per square metre at 50 Pascal. New build social housing sector properties will need to go even further, meeting Code level 4 requirements.

Diagram showing the airflow inside the Greenstream MVHR



Houses can be built with the level of air tightness to meet the Code, but as this air tightness increases the harder it is for the humidity in the building to escape which will create an unhealthy living environment for the occupants if some form of mechanical ventilation is not included within the property. The best solution to this issue is installing mechanical ventilation and heat recovery.

The Greenstream units will operate at up to 91% efficiency by using EC (electronically commutated) motors and a sophisticated but easy to use control system. Occupants will also benefit from the extremely low noise levels produced by the units as a result of using these specific components.

COMING SOON

Greenstar Gas-fired Boiler Accessories

For those you that may have missed last month's feature on our new gas-fired boiler accessories, here's a quick recap:

Vertical Pre-piping Assembly Kits

We are the only manufacturer whose designs enable pipework to be run behind the boiler as standard and we've taken this feature a step further with our Pre-piping Assembly Kits. The pre-bent pipes have swaged-ends for easy soldering and will save you approximately 30 minutes on installation time.

The kits contain:

- 22mm CH flow pipe
- 22mm CH return pipe
- 15mm Mains water inlet pipe*
- 15mm DHW outlet pipe*
- 22mm Gas inlet pipe
- Earth bonding strip

Pre-piping Assembly Kits are designed for Greenstar i Junior, Si, CDi, i System and CDi System boilers.

Earth Bonding Strip

Available as part of the kits and also separately, this not only looks

neater, but saves up to 20 minutes on installation compared with fitting separate earth bonding tags to each pipe. It can be used with all Greenstar wall mounted gas-fired boilers.

Below Boiler Pipe Cover

Suitable for use with all Greenstar wall-hung appliances, this is a neat and simple solution for hiding the pipes on installations where they run below the boiler. The cover is curved to match the profile of the boiler fascia and is manufactured from white satin finished plastic.

*Not applicable to Greenstar i System or CDi System kits

The Complete Heating Solution: Greenfloor Underfloor heating preview

We are set to unveil an underfloor heating package which will mean we will be able to offer the complete heating system

Worcester's Greenfloor underfloor heating uses a heated water filled pipe system and has been designed to work in tandem with Worcester's range of heating solutions, including Greenstar boilers, Greenstore ground source heat pumps and Greensource air to water heat pumps.

Heated floors act as efficient low-level radiators, delivering heat energy evenly into each room, gently warming the living space through a combination of radiant energy and heat conduction. In a modern, well insulated home, where heat loss factors have been taken into consideration, underfloor heating acts as the primary heat source, eliminating the need for radiators and allowing a free, unrestricted layout within a room.

Martyn Bridges, director of marketing and technical support, said: "Underfloor heating is widely used in northern Europe and in recent years has become more popular in the UK,



both for new builds and updating existing properties.

"The addition of Greenfloor to our product range, allows Worcester to deliver the complete heating system, enabling installers to benefit from one point of contact for all working parts of the system and homeowners benefit from having their warranty with just one manufacturer."

Research shows that an even heat rising from the floor, providing maximum warmth to the feet and cooler but comfortable temperatures at head level, are favourable to the output of a traditional radiator system where the maximum temperature is at ceiling height and floor level is coolest.

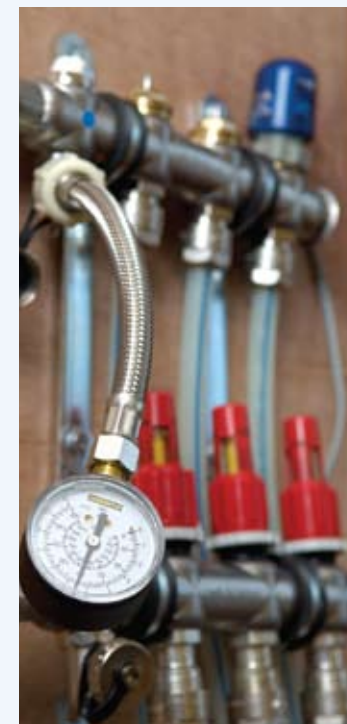
Because the entire floor area is providing heat, the actual temperature required to heat the floor area is much lower than in a traditional radiator

system, this is of particular benefit to the condensing boiler or heat pump serving the system and will maximise the efficiency of the appliance.

The Greenfloor system will benefit from a full set of wired and wireless control options and robust, durable stainless steel manifolds. They also utilise pre-insulated pipe positioning panels for ease of installation and a flexible PE-Xc Pipe, to protect against thermal ageing and stress fracture.

There are also additional health benefits, as underfloor heating provides radiant heat and doesn't rely on convection like traditional radiators. Therefore the amount of dust circulated will be considerably less, providing cleaner air for the occupants and reducing the risk of house mites.

For more information on any of Worcester's products visit www.worcester-bosch.co.uk





This month Installer's Choice welcomes the marketing director of Graham Plumbers' Merchants, Ian Kenny, to share his views on boiler efficiency and the missed opportunity of not extending the boiler scrappage scheme.

THE NEXT GOVERNMENT MUST PUT BOILER SCRAPPAGE BACK ON THE AGENDA



Much like Worcester we were very disappointed that the Chancellor failed to announce an extension to the hugely successful boiler scrappage scheme in the March budget announcement. The boiler scrappage scheme has been fantastic for all involved including the Government. It has helped thousands of businesses, generating a significantly increased level of trade for manufacturers, merchants like ourselves and installers. Not only that, but an additional 125,000 homeowners are now benefitting from much lower heating bills and a better carbon footprint. There are wins all round.

But despite all this positivity, Darling didn't allow the momentum to keep going. Perhaps with the general election looming, boilers had to take a back seat, and if that is the case we can still hope that come mid May, when the dust has settled and we know which colour the next Government is, they may revisit the

boiler scrappage scheme when the budget is revised.

At this stage we can at least say the profile of boilers and central heating was raised and people seriously started to look at the condition and age of their boiler rather than just waiting for it to finally die. But the bigger picture is that there are still around 4.5 million Band G boilers in operation – which should be upgraded.

We wholeheartedly supported the boiler scrappage scheme from the first time the suggestion was made publicly and even developed a dedicated website – greenerboilerscheme.com – to make the process as simple as possible for installers and homeowners to understand, which included a comprehensive list of all the boilers which qualified as Band G and were therefore eligible for the grant.

While we're on the subject of boiler efficiency – we are pleased that

the new Building Regulations part L changes will mean installers can only fit A rated boilers for new and replacement installations. When A rated technology is the best around, we should be doing all we can to make sure people are having the most efficient boiler fitted. Climate change is now such a big issue and it has been well documented that the UK are performing poorly compared to a lot of other European countries, against our carbon emissions reduction targets.

The technology we have in this country that can deliver such high performance heating and hot water is incredible. From our condensing boilers which are now more than 90% efficient to a whole host of renewables, there are so many options out there, we just need to get the incentives right. The boiler scrappage scheme was one which the Government definitely did get right, so let's hope we haven't seen the last of it.

Climate change is now such a big issue and it's been well documented that the UK are performing poorly compared to a lot of other European countries, against our carbon emissions reduction targets.



Value Added Services from Worcester: Quality

As the first in a four part series looking into Worcester's added value services – we kick off with a topic central to the way Worcester works, quality.

Each year, Bosch spends more than 3.5 Billion Euros on research and development, and applies for more than 3,000 patents worldwide. As such it is possible for the company to continually plan and invest in products of quality and reliability. What's more, with a team of 270,000 employees, across 150 countries, it is crucial that the company has these principles running through it – something that Bosch's founder was very passionate about.

Robert Bosch famously once said: "It is an unbearable thought to me that while checking one of my products, somebody could show that I in some way performed inferior work. For this reason, I have always endeavoured to only deliver work which will pass any

objective test, work that is, so to say, the very best of the best."

That drive for excellence runs as a current throughout Worcester, Bosch Group, and it is on this basis that our 6 quality principles were created – ensuring both Worcester's team and customers are both satisfied and exemplified by the drive for achieving the highest possible standards. These principles are set out below:

- The first of the principles covers that of customer's expectations. Ensuring that both product and service expectations are not only met, but fully satisfied, and making sure that these standards are consistently achieved.

- Secondly, and quite importantly, responsibility. Making sure quality and quality improvement is paramount to every employee and at every level of the business.

- Keeping directives, processes, systems and goals set against international standards, customer demands and Worcester's attention to detail maintains that quality regulations are made aware to all, and complied by all.

- When it comes to customer service – the premise that if things go awry, they can always be improved is not good enough in Worcester's eyes. With their dedication to quality, it means doing things right from the beginning and a commitment to streamlining processes.

- By applying methods and tools which carry through this preventative quality assurance it means Worcester can easily learn from their mistakes and quickly eliminate any root causes.

- Lastly, acknowledging that Worcester, Bosch Group's suppliers contribute heavily to their reputation guarantees that they only support suppliers that they trust live up to the same high quality standards.

Measuring quality and keeping track of quality levels and satisfaction can be hard to do which is why Worcester uses Bosch's strict Quality Operating Procedures. Broken down into product quality, quality in purchasing, quality in development, quality in service or quality in logistics – it is clear that at every stage every output is measured and receives the attention needed.

All these measures are laid out for the benefit of everyone who works within the company, or who has had contact with Worcester, meaning a level of quality to be proud of - but also maintaining that level of quality and having the reputation that goes alongside it.

Gary, who runs his own business - G R Mead Plumbing and Heating Limited, has won a monthly installer prize in the national Environment 2020 Awards for fitting a solar powered system to heat a customer's swimming pool.



Gary makes a splash with Eco Award

Eastbourne plumber Gary Mead earned himself the eco award for an environmentally friendly installation in Ratton. The award-winning work has won Gary a £500 voucher for a National Trust cottage holiday and a year's family membership to the National Trust.

Talking about the installation, Gary said: "The three Greenskies solar panels will draw the majority of the energy needed to heat the swimming pool from the sun. The panels can take thermal energy from the sun and turn it into usable heat for the pool by sending it through a heat exchanger. This system alleviates the need to burn gas or oil to heat the pool which would release harmful emissions into the atmosphere."

Gary fitted the solar panels at the four bedroom detached property in March and the customers have been delighted with the results. Gary added: "Although it's a bit early to know how much they are saving on heating bills, they are really pleased with their new eco-friendly system and are boasting about it to all the neighbours."

"To have won this award is a wonderful achievement – it's really encouraging for installers to get this kind of recognition for green installations and certainly creates an extra incentive for diversifying into the renewable heating market."

Gary has been in the plumbing and heating trade for 22 years and set up

his business 13 years ago. He now has his very own Renewable Energy Centre at 164 Seaside, Eastbourne.

The Environment 2020 Awards is an annual competition organised by Worcester and recognises installers who take an environmentally responsible approach to their work. Gary will now be put forward, along with 11 other installers selected throughout the year, for the title of Overall Winner which will be announced in spring 2010. If he wins this, he will also collect leisure vouchers to the value of £1,000

The scheme also rewards the artistic efforts of young people up to the age of 16 who have created an outstanding piece of artwork that highlights the need to be energy efficient and addresses the causes of climate change.

For further information and to download entry forms, please visit www.worcester-bosch.co.uk.



The UK Building Regulations are due to change again in October this year, so to make sure you're up to speed with the latest legislation, Martyn Bridges talks through the most relevant amendments:

Building Regulations update

"Parts F, J and L of the Building Regulations will all see changes implemented in October, but the most notable alterations for heating engineers come within ADL (approved document part L) which covers energy efficiency.

"This document has been under consultation for two years and we will see the latest changes made in the Autumn, but further changes will be implemented in 2013 and again in 2015/2016.

"The main change is a requirement for a 25% improvement in energy efficiency for any new build dwelling. This means that any new build property plans approved from 1st October 2010 onwards must be 25% more efficient than the original Building Regulations standards of 2006. This will bring us in line with level 3 of the Code for Sustainable Homes.

"Within this, the most notable change for the heating industry is that installers can only fit SEDBUK A rated boilers as opposed to both A and B rated appliances being allowed. This means that all boilers fitted after 1st October 2010 must be condensing boilers which operate above 90% efficiency. We're pleased to see this step forward as we have campaigned for A rated only boilers since the condensing legislation was first introduced and chose to only

manufacture A rated condensing boilers from 2005.

"There is one exception where band B boilers will be allowed, which is for oil-fired combi boiler installations within existing properties.

"It is also important to be aware that within part L there is a second tier document called the Building Services Compliance Guide, which contains further changes that we are a little unclear on at the moment. We have discussed the issues with our trade body who have requested clarification from DEFRA and CLG and we hope to see a resolution soon.

"Currently in a house, with a floor area less than 150 square metres, you are required to have a minimum level of controls, which consist of a programmer or timer, a room thermostat and TRVs. You effectively have two zones in a house, sleeping accommodation and living accommodation. Under the current guidelines people can control the temperature of those two zones with TRVs with a room thermostat generally

sited in the hallway. This is a good system that works well but the way the changes in the Compliance Guide are written suggests that from October, homes will need a separate room thermostat and timer upstairs as well as downstairs.

"We don't think this is necessary for two reasons. Firstly, it is unlikely this system would work well because heat rises and therefore it will give the upstairs room thermostat a false impression of how warm it actually is. Secondly, it is very difficult, if not impossible in some situations to pipe the system in such a way that you can have individual time and temperature controls in two separate zones.

"We have responded to say that we don't think this is the right approach and that the current regulations are quite sufficient. Once we have had clarification on this issue we shall inform our customers of the response.

For more information on the Building Regulations changes, visit www.worcester-bosch.co.uk/legislation.

INSTALLER'S CHOICE

Spotlight

Andy Marsden, A J Marsden Plumbing & Heating



With his existing standard combination boiler starting to develop faults, combined with a desire to improve the overall efficiency of his own property, Oldham-based installer Andy Marsden decided that Worcester's Greenskies solar package was the best technology available to help him save energy.

"My house was really low in efficiency and after studying our hot water usage, I decided that by installing a Greenstar 30CDi boiler, a Greenskies solar two-panel system and a twin coil unvented cylinder it would not only suit our needs better, but it would also deliver the best energy saving we could," says Andy.

"With most of our hot water required between 6am-8am and 6pm-9pm, we

now rely solely on the energy generated by the Greenskies solar panels to provide the hot water required for both the bathrooms in my property, morning and evening. The new combination boiler is only required to provide hot water for the kitchen, utility area and downstairs WC.

"This new system has turned a low-efficiency house into a much 'greener' house, which has a more reliable

supply of hot water. The installation has also enabled us to reduce our fuel bills, which is fantastic.

"I definitely believe that renewables is the way forward. It's all about confidence and raising awareness. Once more installations start to take place, I believe this will encourage even more people to make the decision to go 'green' and start saving the amount of fossil fuels used."

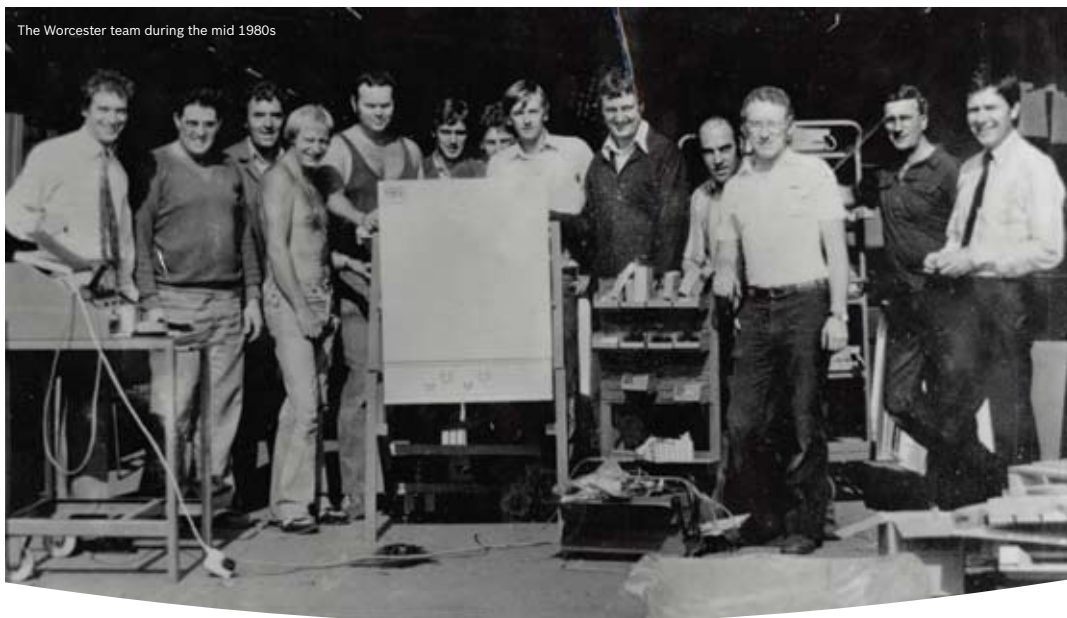


Andy Marsden outside his home in Oldham complete with Greenskies solar panels



In the final part of our series on the rise of the combi boiler we look back at the condensing boiler revolution.

The rise of the Combi – Part 4



The Worcester team during the mid 1980s

The majority of Continental Europe has traditionally been ahead of the UK heating market, particularly in terms of energy efficiency and the use of condensing boiler technology, which was one of the key reasons why the then Worcester Group acquired the Belgian company, Radson in the late 1980s.

“The Radson acquisition gave us access to the Alutherm product which we brought into the UK” says Martyn Bridges, director of marketing and technical support at Worcester, Bosch Group.

“The Radson product was a good performing boiler in terms of efficiency and NOx, if a little heavy and not as installer friendly as we would have liked, but at the time efficiency just wasn’t an issue in the UK. The sort of boilers being installed then would probably be SEDBUK ‘E’ or D now.

Consumers needed a financial reason to embrace change and, with relatively cheap fuel, it just wasn’t there.”

By the late 1990s, the Radson product had evolved into the first Bosch Greenstar. “The first Greenstar was ahead of its time in many ways, but we wanted to do something more tailored for the UK market. At the time the CDi standard efficiency combi was the most popular combi boiler series on the market, installers told us they wanted a condensing version of the CDi.

Worcester decided to take the 24CDi standard efficiency combi boiler as the “donor” product and put the secondary stainless steel coiled heat exchanger from another product in the Bosch group into the channel in the back of the 24 CDi RSF product and re-ran the flue gases through it. This resulted in a SEDBUK band ‘C’ condensing boiler, (more latterly to become band ‘B’) with the same features and flow rates of the 24 CDi SE combi.

The first Greenstar was the forerunner of the HE Series launched in 2001



Worcester’s Greenstar CDI boilers are the most popular on the market today

which comprised five combination boilers and two system boilers. “The HE Plus was fitted with lots of new technology including a load compensation unit and text display, but some of the innovation made it occasionally unfriendly to the installer and complicated to programme, particularly in the social housing market. But, it got us up and running in the HE market and at its peak we were selling 70-80,000 a year.”

However, major change was on the horizon for the UK’s heating industry, with the Government making ominous noises about action on climate change and the incorporation of new efficiency standards into the Building Regulations.

“By early 2003 we knew there was strong possibility that the Government would demand, at some point in the future, that all boiler replacements would have to be high-efficiency SEDBUK ‘A’ or ‘B’ rated boilers” says Martyn. “Although we couldn’t be certain that the Government would enforce the change, and almost up to the last minute we were expecting a change of heart, we knew that high-efficiency was the future and that we

needed to do something specifically for the UK market.”

The Government’s changes to the Building Regulations, Part L, were a revolution in domestic heating that many thought the industry would struggle to cope with, but the change was more evolution than revolution for Worcester. “In many ways we were already ahead of the game as we had taken a brave decision in early 2003 to develop a floor-standing condensing appliance which was eventually launched in 2004.”

The project team settled on four key design characteristics for the new condensing boiler, namely weight, ease of programming and use, suitability for the social housing market and, crucially, installer friendliness.

“The installer was critical, if he or she looked at the new boilers and saw something familiar, easy to understand and install, we knew we would be onto a winner,” says Martyn.

The end result was a new fleet of 14 high-efficiency condensing boiler models all designed from scratch with the UK market as the sole specification to fulfill.

The new Greenstar range was launched in the UK market in late 2004 and early 2005, a hectic six-month schedule in advance of the changes to the Building Regulations. Now, five years later, the Worcester Greenstar range is unquestionably the UK’s most successful condensing boiler, amongst installers and homeowners alike, with more than 1,500,000 manufactured to date.

“The cornerstone of the Greenstar, installer friendliness, ease of programming and incredible reliability and robustness, is what made it successful at launch and continues to drive its success today.”

It is estimated that there are currently more than 12 million combis installed and working in UK properties. 50% of all heating and hot water in the UK is via a combi boiler and research shows the market is still growing.

So what does the future hold for the combi? “The theory is that new technologies, such as solar, reverse the need for a combi as we revert back to storage cylinders,” says Martyn.

“However, manufacturers are making combi boilers compatible with solar systems and it must be remembered that many housebuilders over the last thirty years have been designing houses on the assumption that they will be equipped with a combi, in other words no tank or cylinder space. So there is plenty of life in the combi yet.”

Martyn also believes that exciting inventions like the hybrid concept of twinning a combination boiler with an air to water heat pump is a better solution that won’t need a water cylinder. “I think this is a potentially better solution for a combi and we are currently working hard to make design alternations that make combis more compatible with a renewable solution. Ultimately, the combi concept is too good to throw away.”



Worcester continues to **build links** with installers of the future

Worcester, Bosch Group's support for future heating and plumbing engineers is going from strength to strength after almost 15 years of working in partnership with education providers.

Established in 1996, the College Links programme now helps over 5,000 students, throughout 130 colleges and learning centres, nationwide. The scheme supports both students and lecturers with its award-winning training structure and continued professional development courses, which enable new installers to keep up to date with best practice as they embark on their career in the plumbing and heating sector.

Understanding that students are the future of the heating and plumbing industry, Worcester sees the importance of building relationships and offers hands-on experience with Worcester products, throughout the engineering qualification.

Phil Bunce, training manager for Worcester, Bosch Group says: "Giving the students on our College Links programme the chance to get to grips

with the different technologies that Worcester offer, will give them the knowhow required to recommend our products to customers once they qualify."

Most newly qualified engineers will find that they need advice and guidance throughout their first few years on the career ladder. Keen to maintain relationships with newly qualified installers, Worcester provides training discount vouchers to heating and plumbing students once qualified, encouraging them to participate in future courses.

Worcester also provides all of its 'linked in' colleges with a range of professional display equipment as well as providing lecturers with literature, demonstration equipment and inside story posters to aid the teaching process. This is in addition to the

500 or so appliances that have been donated to the workshops within the colleges, including boilers, heat pumps and solar systems.

Last year, Worcester developed welcome packs, designed to further strengthen Worcester's links with new engineers. "The Worcester student pack has been introduced to support college students as they embark on their industry qualification. By giving them the tools to learn early on, we're assisting in raising the level of knowledge of the installers of the future." Phil added.

The packs contain a USB memory stick loaded with marketing literature, a range of training DVD's and a Worcester branded pen and scribble pad.

For more information about Worcester's College Links scheme, visit www.worcester-bosch.co.uk.

YOUR QUESTIONS ANSWERED



Brian Murphy, and his team of technical advisors answer some of the most common questions they've been receiving from installers:

Your questions answered



How do I connect my external controls to my Greenstar gas boiler?

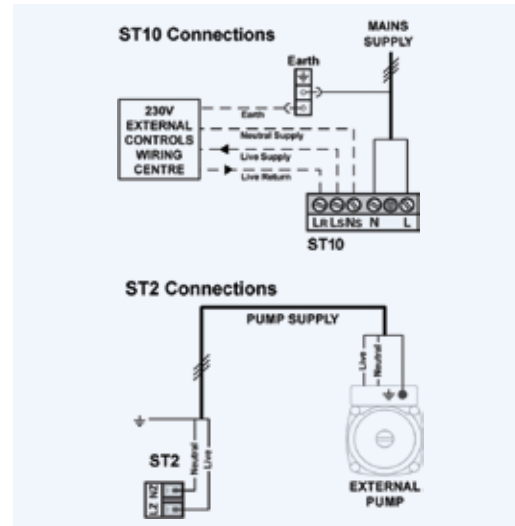
The mains supply to the boiler must be through a fused double pole isolator situated adjacent to the appliance. The isolator must have a contact separation of 3mm minimum in all poles. This is connected to L, N & E on the ST10 Connector.

Also on the ST10 Connector are terminals

LS (Live Supply 230v ac)

NS (Neutral Supply)

LR (Switch Live back from external controls)



On the Greenstar CDi Regular the circulation pump is connected directly to the PCB on the ST2 Connector, LZ is pump live, NZ is pump neutral.

Connecting the boiler in this way will ensure that the installation complies with current wiring regulations which state that there should be a single point of isolation for the boiler and associated systems.



What is pump head?

'Head' is a term widely used and has slightly different meanings depending on the application. For example, 'static head' – This is a measurement of fluid height difference and relates to the pressure a fluid exerts due to gravity.

1 metre of water = approximately 0.1 bar (100 mbar)

From the point of view of a central heating pump, enough static pressure to provide the minimum inlet pressure is the only concern. In a central heating circuit, the circulating pump is usually unaffected by static head differences as gravity acts equally across the system, so the static pressure at the outlet of the pump is equal to that at the inlet.

Pump head – This is a description of the available pressure difference between the inlet and outlet of a pump. It describes the pressure available to overcome frictional losses in the pipe work and system, at a given flow rate. Imagine putting your hand over the outlet of a pump. The pressure you feel is the maximum that can be delivered by the pump, but this is at zero flow. As you open up your hand water will flow, but the pressure will drop. It is the same in a heating system. The greater the flow required the less pressure available to overcome the resistance of the pipe work and fittings.

Put simply a pump can be sized on the flow rate required to deliver the necessary output (to all radiators, cylinder etc), against the pressure loss of the index circuit in the system. The index circuit is the circuit with the highest pressure loss (usually the longest run). Pump pressure available is usually expressed in mbar but may also be in Kpa (kilo Pascal's). 1 kpa = 10 mbar.

Pipe work pressure loss is usually expressed in terms of m/m. This is metres head loss per metre of pipe work. This will change depending on the flow rate through the pipe and pipe material.

For more information see the CIBSE domestic heating design guide.



Win an exclusive PCB Test Card. We have 50 to give away!

In the March issue of Installer's Choice we told you that Colin Davies, training supervisor at Worcester, came up with the idea to create a credit card sized PCB test for all Greenstar boilers. The device allows engineers to check the PCB without damaging the edge connector by trying to force the probes of an electrical tester into the connections and this month, we have 50 to give away.

The new Harness Test for the PCB includes the following features and benefits:

- Simple and handy credit card size
- Compatible with all Worcester Greenstar boilers (including older models)
- Annotated with sensor names for simple measurements
- Provides easy access to harness and components
- Faster fault diagnosis, meaning reduced time on site

- First-time fix rate increased, ensuring fewer need for a return visit
- Component changes minimised, meaning lower cost for homeowner
- Allows installer to fix problem themselves, allowing fewer engineer call outs

To win a free PCB Card simply answer the following question, the 50 installers with the closest answer will win.

How many people did Worcester train in 2009?

To enter, simply complete the entry form below and send it back to our editorial office: Installer's Choice, May 2010 Caption Competition, Willoughby PR, 43 Calthorpe Road, Edgbaston, Birmingham, B15 1TS.

Tick box as appropriate:

- I would like to receive further information from Worcester, Bosch Group
- Please do not contact me with further information

Terms and Conditions
 1. No cash alternative
 2. The decision of Worcester, Bosch Group is final
 3. One winner will be notified by the 18th June 2010

Answer:

Worcester trained _____ people in 2009?

Name: _____

Business Name: _____

Business Address: _____

Daytime Telephone Number: _____

Email: _____

Keep in touch

No matter where you are based around the country, Worcester has a team of local representatives available to help with your specific requirements.

This issue we focus on the Northern and Scotland Team. Here are the details of the team:



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 Areas covered: **CA, DH, DL, LA, NE, SR, TS**



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