

Burning Issues and Hot Toppings

A Rough Guide to Choosing, Buying
and Using Wood Fired Ovens



Jay Emery





Burning Issues and Hot Toppings

**A Rough Guide to Choosing, Buying
and Using Wood Fired Ovens**

Jay Emery

Cover photos: Carole Hart Fletcher

Copyright©2013 **Jay Emery**

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the author(s).

Edited by Kevin McNulty

Cover design and page layout by NABO

Member of NABO

To join visit: www.nabo.biz

Introduction

Ever since their introduction to the British market, wood fired ovens have become increasingly popular. After being endorsed by celebrity chefs such as Jamie Oliver, The Fabulous Baker Brothers, and Pizza Pilgrims, the rustic style of al fresco dining is more prominent than ever before. With many various options and alternatives to choose from when buying your own wood fired oven, the process may appear a long and complex decision to negotiate. However, inside this guide you will find the answers to many of the questions you may have about buying your wood fired oven, making the experience as quick and as simple as possible. Whether you want to simply share the fresh taste of wood fired food in the comfort of your own garden with friends, or if you're looking for something more commercial to introduce into a business opportunity, be it into a restaurant or a mobile unit.

Regardless of which category you fall into, you will still be faced with the same challenges. You need to know which oven to buy and how best to use it. With more ovens becoming available, it is more important now than ever before that you fully understand the quality, functionality, efficiency and practicality of the various models available.

My name is Jay Emery founder of Dingley Dell Enterprises. I first started making fired-ovens over 30 years ago, using African termite mounds and making mud domes next to childhood bush camps. For the last decade and a half I have been designing, building, and selling wood fired ovens in the UK. In this time I have built thousands of ovens of all shapes and sizes and been through many prototypes and designs to find what works best for every possibility.

Jay Emery

Founder of Dingley Dell

Choosing Your Oven

There is a certain romanticism that comes along with the idea of al fresco dining and stepping outside of the home comforts to cook. Taking the time to sit down with friends and enjoy the long summer nights as you cook and maybe even enjoy the odd tippie. The first problem is people believe that they need a large oven to be able to cook the right amount of food to comfortably cater for six or even ten people. Because of this first misconception, it is also misconstrued that your new oven will cost you a small fortune, so suddenly the thought of enjoying a fine evening of wood fired festivities, turns into more of a pipe dream. The truth is that when most people first call they ask if I have an oven for their garden or restaurant that cooks 4-8 pizzas at a time.

But while this is what the documents and advice on the internet would lead you to believe, it is advice mostly from over zealous salesmen trying to make a quick buck and boost their sales figures. The truth is that you do not need a huge oven unless of course you have loads of staff and are looking to turn out 100s of pizza per hour. I can easily qualify this by saying a good well-made smaller oven will be better than a badly built big oven.

Let's look at this more closely...

Since a thin base Neapolitan pizza cooks in under 90 seconds - and most people can't open and top a pizza in less than 90 seconds - then surely for home use an oven that can cook one good size pizza at a time is plenty big enough. After all, if you went for a large oven that cooked 6 you would be sending out invitations to your friends saying - Pizza party Saturday night, starts at 7.45 pm ends at 7.47 pm - and where's the fun in that!

For mobile and commercial catering it's the maximum number of pizzas per hour that you want to make that will determine the size of the oven. So my recommendation first and foremost, is buy an oven with as many features as you want for the type of cooking you do, not just a big oven. Of course if it's for home use and you want to bake bread and do long slow cooking, then insulation on the oven becomes important.

When you're thinking of cooking several pizzas for your guests, you don't need to buy an oven large enough to cook 4-6 pizzas at a time. This would be much more costly and much larger than required. The truth is that what you actually need to do is take into consideration the intense heat created and held by a wood fired oven. Buying a much smaller oven will be more than sufficient for your needs if you want to cater for friends and family in your

home. Remember - once your oven has reached its correct cooking temperature, you can easily cook a Neapolitana-style pizza in under a minute. Not only will you save money on the initial purchase, but you will also save on time and fuel, as the smaller oven won't require as much time or energy to reach its cooking temperature. The other benefit of this is that you'll be able to keep the size of the oven to a minimum, the cooking process will be quicker, less costly and give you more free space.

The Letter of the Law

Smoke

When buying a wood fired oven, one of the first and most important things you need to do, is make sure the oven you buy abides by the regulations set by the Smoke Control Act. This standard is part of the Department for Environment, Food and Rural Affairs (DEFRA) clamp down on monitoring air quality and smoke pollution. With 80% of the UK population now living in smoke controlled areas, it is imperative that your oven follows the letter of the law. Failing to do so could lead to you being liable for prosecution under the Nuisance Act. Regardless of whether you're living in London, Leeds, Birmingham or Glasgow, the same blanket rules apply, unless your appliance is exempt, legal action can be taken against you. To get an exempt appliance you need to make sure your oven has been tested and approved for use in a smoke controlled area. It must be certified and meet the set criteria as specified by DEFRA. A list of such appliances and more information can be found on the DEFRA website approved appliance list.

Pompeii ovens

Pompeii Ovens, also known as brick ovens, are becoming very popular as DIY projects. People take up the challenge of creating their very own brick oven to cut costs. However, this frugal approach will also take its toll on the quality of the oven. Remember, if you should take up this task then you must abide by the aforementioned laws and regulations. And keep in mind that there are no brick built ovens that are DEFRA exempt, so you can only build one if you live outside a smoke control area. It is particularly important in building Pompeii ovens that you use the right bricks and materials to build the oven in the first place. If the thickness of the dome is too large, then thermal mass will take much

longer to reach the correct cooking temperature. With general engineering bricks and fire bricks being around three to four inches thick, the time it takes to rise to cooking heat can be as long as approximately four and a half hours. This is a long time to be bellowing out smoke from your chimney into a smoke controlled area, potentially upsetting neighbours and you've not even started cooking yet! Another thing to remember is that although the temperature inside the oven reads 300 degrees, simply by opening the door to check the temperature, can result in the temperature plummeting back down. This is due to the heat not penetrating all the way through the brick and the oven then trying to balance itself.

Beware of anyone who says that a hand built brick oven does not need exemption. I know of several restaurants that have had their Italian built ovens smashed up by Environmental Health, as well as a few domestic ovens that have been closed down or face prosecution.

Beware also the myth that a brick built oven is a lot cheaper than a modular assembled one. You will be in for a shock.

Clay / Adobe ovens

Clay ovens are cheaper to produce and can be used as an educational project to gain a better understanding of how wood fired ovens work. But before you select which clay fired oven you would like to buy, you firstly need to understand the way the oven works. The most important part of this, as with the Pompeii ovens, is getting the right thermal mass. Ovens made from clay will be made with different types of clay or refractories. An oven with a clay thickness of one and a half inches is ideal. However, I hear so many horror stories from people who have had their hand made clay oven collapse during their party and then ask why.

These ovens originate from extremely dry climates, so using this type of oven in somewhere like the UK is not going to be ideal and will probably end up needing to be rebuilt every year. So they are not going to be a long term investment due to the variation in British weather and the high ambient moisture. If you decide to build a clay oven, then you will need to light it up regularly or it will collapse either from excessive steam build up, composting of the straw or simply water ingress and the winter freeze thaw cycle.

If you purchased a refractory dome you could then cover this with cob, retaining that handmade rustic feel and passing the DEFRA exemption if the oven was approved.

Insulation

When trying to decide whether or not you need an insulated oven, you need to consider what type of cooking you intend to do with your wood fired oven. For example, should you have a clay oven with a refractory of around one and a half inches which means that the oven will get hot within about an hour and a half and would cool within about two and a half hours. So it would be possible to cook pizzas or a leg of lamb. However, should you want to cook a larger variety of dishes, such as long slow roasted Mediterranean dishes, such as Moroccan tagines, kleftiko lamb or pulled pork, then you would require cooking times of between four to six hours. By using an insulated oven, it would be usable for anything up to eighteen hours, meaning these dishes could be comfortably cooked, as well as multiple batches of bread. So the real benefit of insulating the oven is to give you longer cooking periods, which in turn broadens your horizons on what types of food you can choose to cook.

Choosing the right wood

One of the biggest problems that people find when trying to use wood fired ovens is selecting the right fuel to burn. Selecting the wrong type of wood – wood that is excessively damp – won't create the right amount of heat for the oven. Hard wood (Oak, Beech and Ash) that is 8 to 15% moisture is perfect for using with wood fired ovens, anything other than this and the fire will not burn efficiently enough and will create a lot of smoke and upset your neighbours.

Lofting and Chimney Position

Any well designed oven should have good lofting. The lofting is the heat space in the oven which regulates the temperature of the cooking. This means that the oven retains heat in a much better way. In other words without the loft space when the door to the oven is opened, the heat just vents straight out of the door. The temperature drops and so begins an almost futile fight to keep the oven hot because the heat keeps escaping. So, instead of using a central chimney which constantly allows the heat inside the oven to fluctuate because of the continuous heat running out through the hole, and cooling the oven. This means that cooking becomes difficult to time and for delicate cooking can be incredibly difficult to judge. In effect you have more of a heater than an oven, as you can't regulate the temperature at a stable level. Moving the chimney to the back of the oven will suck cold air over the fire when you open the door and up the chimney, again this is not what

you want to do. Pulling cold air over the entire fire and out the rear chimney will cool the fire very quickly.

The answer to holding a constant heat is to allow the heat to remain inside the oven by having a higher space in the dome creating a loft. Placing the chimney forward of the door means the air comes in through the mouth of the oven, over the pizza, and the heat is grills down from the top of the dome with the flames and the radiant heat, and the excess heat spills out through the door into the chimney.

Oven Floors

To ensure that your oven reaches a higher temperature quickly, another essential part to consider is the oven floor. The floors need to be very durable as they take a lot of stress over time from scraping and scrubbing to keep the floor clean. Time will take its toll on your oven floor, with some ovens the floor is an integral part of the design, which is to say that once the floor is damaged then the entire oven needs to be replaced. Buying an oven with replaceable floor tiles gives you much more durability and means that your oven's lifespan will be increased. Nothing could be more frustrating than the floor of your new oven breaking and all of a sudden you need to reinvest in a whole new oven.

Keep it Simple

When buying an oven you should always look to buy an oven that comes ready built and ready to cook. Remember why you're investing in this oven. You want to cook food and you want to experience the taste of the al fresco lifestyle. Buying an oven which you need to manufacture yourself on its arrival is always going to cause a couple of problems. Firstly, it will mean that you have to build it. This is fine if the instructions are easy to follow and you have some knowledge of building ovens. This is of course assuming that the modular oven's pieces all slide together without any hindrance. With imported ovens that require a large number of segments to be pulled together, the reinforced layers that are used to build the ovens soon prove to be weak. To beat this issue you should instead look to invest in an oven that is moulded in one piece, which means that the oven is delivered to you in one piece and it has much stronger reinforcing within the structure. Without much fuss you can soon be up and running. The only thing you will need to do is get the oven onto the stand and once that's done, you are good to go. Keeping your oven rustic, robust and functional, gives you a much sturdier and much more reliable oven. With the extreme heat that ovens experience, any fancy extra decorative tiles and beautification which are added to the

exterior of your oven, is simply just going to become unstable and fall off. Function over form is definitely the way forward when it comes to selecting the correct wood fired oven.

The Preparation Game

Deciding where to put your oven is another key decision when you first come to install your wood fired oven. Ensuring that you have a preparation area close to the oven is imperative. Remember - you can cook a pizza in well under a minute, so you need to have quick accessibility to your oven. What you also need to do is have clear visibility into the inside of your oven, so having a preparation area to the side of an oven, which is forward facing, means that your vision is blocked and you end up with a lot of burnt pizzas. Simply by twisting the oven towards your preparation counter, means you can see into the oven and cook perfect pizzas. To expand further on this you also need to consider that there is such a thing as left and right handed setups. So, if you are right handed then the oven needs to be placed on the right hand side of the counter. Just as in reverse if you are left handed, the oven should be on the left hand side of the counter.

Mobile Pizza ovens

Taking your oven on the go to festivals and events is a great way to share your love of wood fired ovens. With large crowds all needing feeding in one place, the mobile wood fired pizza business can be a very profitable venture. Many people have already tried and tested the idea and have been more than happy with the results. Below you can read some of the successes that have come from the mobile industry.

Packman Pizza

“When we decided to set up our mobile pizza business, we knew it was going to be tough and a steep learning curve. However, after meeting Jay in November 2012 for a demonstration of the Bushman Wood Fired Oven, we were confident that with a lot of hard work, we could make this dream a reality.

At our launch party in April, Jay was 110% hands on from start to finish. The knowledge we gained in the 7 hours we were with Jay was invaluable. You couldn't afford to buy that information! And we were exhausted!

Twelve weeks on from our first event and Packman Pizza is going from strength to strength. We couldn't have done it without the continued support and enthusiasm from Jay. Happy Days!”

The Woodbox.co.uk

"I began to work with Jay very early in the concept stage of Woodbox and his input in those early stages was invaluable, both in the shaping of the concept, and the design of our vehicle.

We're over the moon with the oven he built for us & it has been a huge success and we feel totally confident with its performance. Jay's continued after sales support and advice is both personal and utterly professional and with so many other things to think about with our business, one less worry is knowing Jay is at the end of the phone and always available to help and advise on any problems that may come up."

However, before you go charging into the mobile dream thinking that you can throw a wood fired oven into a van and hit the road, there are a few things you need to think about first.

More than anything you need to know that although a coach builder will obviously know how to build coaches, what they don't know is how to develop a mobile pizza business and how to best lay out the internal workings of a pizza van or trailer. Instead you need to approach someone who has experience in this field.

I have helped around 70% of all people running mobile wood fired-pizza oven businesses in the UK get started, offering advice through seminars to decide what type of business best fits in with their needs. Be it a catered trailer, or a stand in or stand out trailer option. These all have pros and cons dependent on your situation. I'm sure that you will realise, as many have, the importance of attending one of our start up seminars to get you moving in the right direction. Check out the website for testimonials from some who have attended.

Fully Catered Standout Trailer

The fully catered trailer is a fully enclosed unit, although the oven is on the trailer and you stand outside the trailer with a gazebo, there is no further setup. All the refrigeration units, hot water units, hand basins, dough rollers and all the rest of the equipment closes back into the trailer.

Stand-in trailer

The stand-in trailer holds not only the oven and all the rest of the equipment required but it also holds you, giving you an internal serving position. As you may imagine these trailers are the most complex to design as the internal layout is absolutely critical to the rest of the design. Make a mistake and you can end up towing an illegal trailer, due to incorrect weight

distribution. Remember- some wood fired ovens weigh in the region of 450 kilos, and this weight needs to be placed correctly or you can end up with a very serious steering problem.

No frills trailer

The no frills option is an oven on a trailer with a gazebo over the top. This gives you a very quick and easy setup. You just need to setup your tables and cool boxes and at the end of the day, drop the gazebo and tow the oven away.

Vehicle Conversions

Another option for mobile catering is to use a vehicle conversion. Many vans are capable of running pizza businesses. However, there are many legalities with which you must comply. You will again need to think about weight distribution and the interior layout is also essential. Vehicles come in all different models, shapes and sizes, so getting it right first time is the most vital part of the process. The best mechanic in the world is not going to be able to offer you advice on how to best setup your internal layout for a pizza business, it needs a professional with experience in how the logistics of these things work best.

Wood fired ovens in Restaurants and Public Houses

Producing an extra special dining experience for your customers is something that will set you apart from the competition. So, when you're looking into placing a wood fired oven into your business, you need to consider what menus you're going to offer and how you're going to layout the business. Regardless of your past experience, you really need to seek the advice of someone with first hand experience on the subject. After all, if you can successfully incorporate a wood fired oven into the back of a small van, then up scaling the design into a restaurant or public house is going to be something that will naturally follow. Remember - getting the layout right first time is crucial to the whole process. Get this wrong and you'll be forever trying to amend the difficulties and trying to find solutions to problems which you really could have avoided. By the same token, know how many pizzas you are going to want to make per hour maximum because answering this one question will determine the oven size you need, the number of staff and the kitchen layout. We have helped companies who produce a maximum of 30 per hour up to 600 per hour, so we can help you too.

Ps - don't always trust a kitchen designer to do a layout for a pizza Restaurant, invariably they get it wrong - sometimes badly wrong, costing you time and money - when it could all have been sorted by someone who knows.

The future of wood fired ovens

Imagine that you love the idea and the look of the wood fired oven, but for whatever reason you feel the wood fired process just isn't for you. Until recently your options would have been extremely limited, if not nonexistent. But, after much research and development here at Dingley Dell, we are proud to be on the cusp of something wonderful. Our new wood fired gas combo ovens look just like a wood fired oven, but run on gas. We appreciate that there are other ovens out there which may claim to do the same. However, please note that ours are being CE certified and will have GAD approval (at time of writing). Ensuring that any oven you buy complies with UK legislation is imperative, you must be very cautious when buying ovens of this kind. Many may claim to have CE certification, but please make sure it's the oven and not the burner that is certified. If only the burner is certified then you are in danger of using a product which is not compliant with UK standards or legislation. Being the only UK manufacturer to put their ovens through the UK standards, it has become very obvious that most, if not all, the imported gas/wood imported pizza ovens do not meet the higher UK standards and are not compliant for use in England.

Conclusion

I hope that you have found this guide both helpful and insightful, providing you with a reliable source of information to turn to when deciding on which wood fired oven is right for you. Regardless of your needs, whether you want to enjoy the pleasures of wood fired food at home, from the back of a converted van, or as part of your restaurant business. After building thousands of wood fired ovens throughout the years I can confidently say that the information held inside these pages should help guide you to what will best suit you.

The whole idea of al fresco is to cook outside and peacefully enjoy the cooking of your food. Waiting three to four hours to cook a pizza, feels a little extreme. Especially when you know that you could have used a refractory oven which would have heated up in a quarter of the time. Having a load of builders in your garden for weeks on end may also not

be your idea of fun, so we can help with ovens that can be built in by builders or delivered ready assembled all set to go. The amount of work that you have to do is entirely up to you with bespoke packages to suit.

About Dingley Dell

Dingley Dell started in 1999 and has been producing wood fired ovens ever since, developing our own ovens to create the perfect designs which will give you the best results. However, at Dingley Dell we are also in the forefront of innovation when it comes to the future of wood fired ovens. Beyond this, we want all of our customers to become champions in their field. Offering seminars that give clients not just the advice and the help they need to install their ovens, but also everything else they need to know about starting up in the industry. After helping so many clients successfully build their brands and get their businesses off the ground, Dingley Dell has been able to create a tried and tested comprehensive business model which allows us to develop a bespoke programme for each client. We are able to give a step-by-step guide which they can use to expand their market. We also give comprehensive advice on designs, drawings, menus and even a training and mentoring programme. We go beyond selling ovens to people and are proud to offer so much more. Making sure that you know what to do and how to do it, when it comes to using your wood fired oven. It's about sharing the experience and sharing the success. The testimonials below give a brief glimpse into just how happy our customers are with the service they receive from Dingley Dell.

CAOIMHE O'KANE

Papa J's

"It's been a long time since I spoke with you last, I thought I might drop by and let you know how I'm doing. So far, It's been beyond expectations, I got off to a flying start and only now starting to 'slow' down with events. I cannot quite believe it's not even a year since I first met you in Nov '12 to check out your ovens and I am now sitting telling you how well my oven has worked for me! It's a fantastic product and I am still wow'ing customers, their comments have been so rewarding and I pray this is only the start of a long and lively path for Papa J's."

"A massive Thank-you Jay for your dedication to my custom!"

ALAN COBY

Owner Galleon Beach Cafe Polzeath

"After only 5 Weeks, This week my weekly revenue from Pizzas from my Dingley Dell Wood Fired Oven exceeded the TOTAL Cost of the Oven and Total Installation Costs. It also generated higher revenues from "Booze". We are now selling in excess of 60+ Pizzas per day (and increasing) with a GP in excess of 80%".

MARK GODFREY

Managing Director

Deer Park

Wow!!! what an amazing piece of Kit our new wood fired oven is. The team at Deer Park still cannot quite believe we have such a fabulous new outdoor cooking area that can be used for weddings, parties, celebrations and corporate entertaining, it is a great new USP for us and has helped to convert 4 weddings already!

Jay has been superb, from our original meeting at Dartmouth Food and Wine festival to the installation he was always available for advice and assistance...I must say if I was buying another I would definitely pay the extra to have him install it!!

The day's training with Jay was excellent, extremely informative, hands on and gave Chef and his team some great top tips!

All in all we are very pleased with the Oven, the service and Jay's commitment to his customer, a great experience!

Pizza Monkey - Bristol

"I cannot thank you enough for all your help and guidance when buying my wood fired oven. Not only did you help with every stage of the process (including the best part – pizza tasting!) but you truly went the extra mile by taking me on a training day to see how it all works.

Your approach to customer service is excellent and combined with such infectious enthusiasm you really do have your customer's interests at heart.

Even after taking delivery of the oven your customer service does not stop there and you are always happy to help with any questions or issues I often have.

The oven itself performs fantastically and gets much attention when I'm out and about, even the Italians are impressed!

I wish you all the best with your business and look forward to working with you in the future."

Hi Jay,

We just wanted to say a huge thank you for meeting with us and literally giving us 'food for thought'.

Your seminar provided us with a wealth of information and helped us to truly visualise what we wanted our business to look like.

We came away from our meeting bursting with ideas and full of enthusiasm. Additionally, thank you for taking the time to answer our endless emails we have sent since our seminar!

We look forward to continuing to work with you.

Kevin & Farrah

Hi Jay

Thank you Jay for your time today, your enthusiasm knew no bounds. From the moment Carol and I met you spoke with great passion, knowledge and authority. Your product is extremely well designed and covers all aspects of wood fired ovens. You have certainly given us much food for thought!

Regards

Carol and Richard

Thank you for your time on Friday. I can't tell you how useful and inspiring it was. I feel relieved and confident that we have now found someone we can really trust to help us start our business as well as we possibly could. Thank you.

I'll be back in touch later this morning.

Best wishes

Anna McGregor

Hi Jay,

The seminar that you provided into the setup of a wood burning oven business was inspirational. Your experience and insights into the business gave me a great deal of food for thought, pardon the pun.

Prior to your seminar I had many ideas but ultimately lacked a clear strategy for starting up such a business. You demonstrated in a clear staged approach how to set up and ongoing business development, which was balanced and a way for me to get on with this exciting business opportunity.

Jay & Gemma Marsh



Burning Issues and Hot Toppings

A Rough Guide to Choosing, Buying and Using Wood Fired Ovens

It might be due to the perceived vagaries of the British weather, but wood burning ovens have been a long time coming to these shores, with the first examples starting to appear as recently as 2000. Word spread quickly and there is now huge interest from people wanting an oven to use in their gardens as well as from restaurants and hotels. There is also a growing band of entrepreneurs who are installing ovens in vehicles of all shapes, sizes and ages.

Regardless of which category you fall into you will still be faced with the same challenges. You need to know which oven to buy and how best to use it. With an increasing variety of ovens becoming available. It is more important now than ever that you fully understand the quality, functionality, efficiency and practicality of the various models available.

In this unique guide, Jay Emery of Dingley-dell.com gives you a comprehensive understanding of the particular limitations and advantages of each oven. Enabling you make an accurate and informed decision when buying the oven of your dreams. Inside he covers topics such as...

- Clay, brick steel or modular
- Insulated or not
- Different types of floor
- Which ovens retain heat best
- Where should the chimney be
- Will the Smoke Control Act effect its use

Jay has over 30 years of experience in designing, building and using outdoor ovens. With the advice and insight he provides in this guide, you will be able to enjoy the delicious delights of al fresco cooking at its very best.

Telephone: +44 (0)1905 621 636

www.dingley-dell.com