ALFA

We cracked the code to making great pizza at home

ALFA ACADEMY

The fire,
what it is and why it is good

Cooking with fire has existed for thousands of years and has always fascinated us. Since time immemorial, the fire was the centre of social gatherings, from the tribes of prehistoric times to the present-day evenings on the beach. For these reasons and so many more, the fire is in our souls and if you close your eyes just for a moment you will recall memories of magical moments spent with your loved ones, moments of pure happiness.

The fire is not only emotions, it is genuineness. Cooking food with the heat of the fire allows you to give special flavour to dishes in a constant mix of tradition and innovation, balancing past and future. Rediscover the nature of things, the food, the warmth, the pleasure of cooking for yourself and especially for others.

If you want cooked and tasty food, fire is what you are looking for.


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The chemistry of fire

In a wood-fired oven there are many chemical and physical mechanisms that come into play during cooking.

To transmit the heat, there are three systems in nature: conduction, convection and radiation. In a wood oven there is activated all three systems, the heat transfer occurring in a natural way. While the wood burns, the heat is transmitted to the dishes through the electromagnetic radiation that the flame emits (irradiation), through the heat accumulated by the refractory oven floor, with which food comes into contact (conduction) and thanks to the air vortex that is generated due to the pressure difference that exists between the inside and the outside of the oven (convection).

The flame is able to reach very high temperatures, impossible to obtain with the microwave oven. The high heat temperature gives the food a better cooking without drying the dishes. This occurs due to moisture contained in the wood that is burning and then it is transmitted to the food. With it the logs also pass all of their aroma that gives a special touch to the dishes.


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The aroma of firewood

The firewood very often is an underrated fuel. It has a very high calorific value, far superior than almost all the fuels typically used in domestic or professional cooking. There are many types of firewood so you should choose not only according to its affordability but mostly according to its output and efficiency. A lot of firewood tends to burn generating little heat and a lot of coals and it should therefore be avoided.

The firewood used for cooking is normally oak or beech.

The ideal solution would be to use both: the oak to heat the oven at the right temperature and the beech to continue cooking.

Oak

The oak is the perfect way for starting a fire. With a few logs you can have a great flame in no time but then you have to add other types of wood to get it going because the oak does not reach very high temperatures.

Beech

The beech is the firewood par excellence. It's a great fire-starter, reaches high temperatures and leaves little ash and soot. The minus is that it hardly heats the oven at the right temperature.

Cherry

Cherry makes good firewood but it throws out sparks that can fall into the food.

Hornbeam

Considering the value for money assessment, the hornbeam is perhaps the perfect firewood. It's a great fire-starter, it leaves little ash and reaches high temperatures.


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The convenience of gas

In Italy, as well as in most of the Mediterranean countries, there is still a strong link with wood-fired pizza ovens, especially when it comes to Neapolitan pizzas. However, in recent years the market is starting to move more and more towards solutions that contemplate different types of fuel supply.

Ease of use, models increasingly equipped with cutting-edge technology, high-performance safety systems and ease of movement are just some of the features that are driving more and more people to prefer gas ovens for making pizzas over more traditional wood-burning models.

The functioning of the two ovens is similar, the only difference is the type of flame feeding the oven, which in gas models is the presence of a burner in the cooking chamber, that can be fed with gas or methane.

Cooking pizzas, in fact, is almost identical to that of a wood oven, so much so that it always takes place due to: Conduction, Radiation e Convection.

LPG - Cylinder

LPG is normally found in a gaseous state and is a mixture of butane and propane; varying its pressure and temperature, it can be reduced to a liquid state and can therefore be transported more easily.

The calorific value of LPG (12.80 KWh/m3 or 12,000 Kcal/Kg) also allows high caloric efficiency.

- It has a high calorific value and high caloric efficiency.
- In mountain holiday homes, it is a forced but convenient choice.
- The combustion of this gas is environmentally friendly.
- The ovens can be moved easily, as the cylinder does not constrain a connector to the wall, but can “follow” the oven, perhaps being stored in the base.

Methane - home network

METHANE is in the gaseous state and cannot be liquefied like LPG, **its calorific value is 9.54 KWh/m3, its calorific efficiency is lower than liquefied petroleum gas but also has a lower cost.**

- Easy access to methane gas in urban networks make it the preferred system for heating homes and the most common one for producing hot water in homes.
- There is no need to change any cylinders, as the flow from the network is continuous.

The ALFA oven is usually provided in the LPG configuration,
but can be easily converted to methane by replacing the burner nozzle.

Different oven cooking methods

Firebrick cooking

The wood-fired oven makes firebrick cooking a unique experience. With the wood-fired oven you can cook food in direct contact with refractory bricks making your dishes taste better.

Sheet pan cooking

The sheet pan is widely used when cooking over the flame. Its particularity is to help dough rise. Think to pizza for instance. Cooked on the baking sheet, the traditional round pizza, thin and soft, becomes thick and crispy. This is due to the fact that food is cooked by direct contact with the metal rather than with refractory floor.

“Al cartoccio” cooking

The “al cartoccio” cooking is a technique in which the food is wrapped in a parchment paper or in an aluminium foil (or leaves of certain plants in tropical countries). This technique requires no added fat as the parcel holds in moisture to steam the food and preserves its nutritional values.

Cooking over embers

Cooking over embers has been known for centuries all over the world. This technique allows to reach high temperatures and allows you to try different cooking modes by moving the embers closer to the food. You could choose between direct or indirect methods or even cooking with ashes.

Salt-crust baking

Crust baking is very similar to “al cartoccio” cooking but it is made using bread or pizza dough, pie crust, clay or salt. The salt-crust cooking is the most popular technique because it’s easy and quick to prepare and it’s perfect for cooking a whole fish that will keep its natural softness and flavour.


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The essential tools

Pizza peel

An ideal peel for placing pizzas in the oven, with an aluminium head and holes to allow any excess flour to fall.
The Peel is used to place raw pizzas in the oven.

Turner peel

This stainless steel peel helps manage how pizzas are cooked. Indeed, it lets you rotate pizzas while they are cooking and easily remove them from the oven.

Brush

The brass bristle brush is used to scrub the oven surface and remove any cooking residues.

Ember rake

The ember rake helps move and manage the fire in wood-burning ovens.
It is not necessary in gas oven models.

The ingredients

One of the main skills that you can develop over time is the ability to choose the raw materials.

When you use high-quality products you don't have to work very hard to make dough, thereby reducing your time and effort. The wood-fired oven can keep the ingredients fresh and unadulterated due to its quality to reach very high temperatures. In fact, food that is cooked quickly retains the original crispness and flavour.

The nutrients of food, especially vegetables, are best preserved if they are consumed raw or undercooked.

The main flours

Flour is the product obtained from grinding grains.

The product obtained from the grinding and consequent sifting of the soft wheat, with any foreign substances and impurities removed, is called “soft wheat flour” or simply “flour”.

“Wholemeal flour” is the product obtained directly from grinding soft wheat, with any foreign substances and impurities removed.

Soft wheat flour can only be produced in the types classified as “00”, “0”, “1”, “2” and “wholemeal” and must have the following characteristics:

TYPE and Denomination	Maximum humidity %	% on dry matter		
		Ashes		Proteins (N x 5.7)
		min	max	min.
Flour 00	14.50	-	0.55	9.0
Flour 0	14.50	-	0.65	11.0
Flour 1	14.50	-	0.80	12.0
Flour 2	14.50	-	0.95	12.0
Wholemeal Flour	14.50	1.30	1.70	12.0

The importance of water

An essential ingredient is water; its importance is often overlooked. To make a great dough, it's essential to use a water with specific hardness and acidity characteristics. The acidity: The pH is the measure of the acidity or alkalinity of the water, equal to 7 for neutral water. Neutral water is recommended for making dough.

The hardness: The water hardness depends on metals dissolved in the water (basically calcium and magnesium). We recommend the use of a soft water because a water that is too hard slows down the rising. When working the dough, the amount of water that is added to the flour is critical because an excessive quantity of water would create a soft and sticky dough and the fermentation process would be excessively accelerated.

On the contrary, using too little water will result in a dry and tough dough. The correct percentage of water in the dough varies according to the flour strength, the type of grains used and the kind of dough that you want to obtain, but generally the percent hydration is at least 60%.

The yeast and the rise

Yeast is a eukaryotic single-celled fungus of elliptical or spherical shape. More than a thousand species of yeasts have been identified but generally, the most widely used in doughs is the Saccharomyces that has been tamed for winemaking, baking and brewing since ancient times. The natural yeast: Is a flour and water mixture subjected to spontaneous contamination by microorganisms present in raw materials, in the air, in the immediate surroundings etc.

The end products of this metabolism will be lactic and acetic acid, water, carbon dioxide and secondary metabolites. This acidic mass technically defined yeast starts leavening action thanks to gas produced through fermentation process. Furthermore, it brings to the end product some positive aspects such as increased digestibility and storability. The dry yeast: This yeast is dried by bringing the percentage of water down to about 8% in order to ensure a longer shelf-life. Before use, the dry yeast should be proofed by dissolving it in warm water (35°-38°C / 95°-100°F). On the market you can find the brewer's yeast, sold in blocks, the dry yeast or the instant one.

We also have the chemical leavening where some substances cause a foaming action thanks to the gas produced during cooking. Normally the compounds used for this purpose are sodium, potassium and ammonium bicarbonate, citric and tartaric acid. As for mechanical leavening, it is obtained by incorporating air in the dough by the use of creaming, whisking or mixing. Some examples of this process are the whipped cream and the nougat. For long-maturation dough, it's not necessary to dissolve the dry yeast in water.

Kneading techniques

When you mix the ingredients for kneading dough, the arms movement follows some logical steps.

The kneading techniques have to ensure the right mixing of the different ingredients and to allow the formation of the gluten network. The ideal solution is to use the stand mixer with its own dough hook that rapidly develops gluten leaving a soft, smooth and elastic dough. By using a mixer, you will reduce your physical effort and you will have time to accomplish other tasks. If you prefer hand kneading, once you have mixed all the ingredients, knead the dough from outside to inside.

By kneading properly, the time required for all ingredients are evenly amalgamated is 10-12 minutes. It's important to learn to tell when the dough is done which may be possible with a little experience so as to understand when it's time to stop kneading. If you overwork the dough, you will risk ruining the gluten network that formed previously.

Next let's take a look at three different kneading techniques:
by hand, no knead and with a kneading machine.

Kneadind dough by hand

- Put the flour into a large bowl where you will knead dough (it will be less messy than on a pastry board).
- Dissolve the yeast in 550 ml (2.3 cups) of water, stir salt in the remaining water.
- Gradually add the water with the yeast and knead with your hands until combined.
- Add the water with the salt and keep kneading.
- Add the olive oil and continue kneading until the dough feels smooth.
- Turn the dough out onto a pastry board.
- Leave it rise for 12 to 16 hours then divide it into 250 g (8.75 oz) balls and let them rest for 4 hours.

Tips for hand kneading:

- When hand kneading in the bowl, push the dough from the bottom upwards alternating between hands, then roll it back and repeat.
- If you knead on a pastry board, push the dough from top to bottom away from you.

No-Knead Dough

No-knead dough is, unsurprisingly, a method that doesn't involve handling dough.

Gluten chains start forming as the flour gets wet and proteins combine helped by mechanical energy supplied by hand or machine kneading. In the no-knead mixture, dough is folded at intervals during long resting periods allowing the time to develop the gluten.

The difference between hand-made and no-knead dough:

- Hand-made dough needs fewer steps than no-knead dough.
- No-knead needs no physical effort.
- Hand-made dough is far simpler for the amateur pizza maker.

Method:

1. In a plastic bowl preferably with lid, dissolve yeast in water.
2. Add the flour and stir with a fork.
3. Add the salt.
4. Add the olive oil and continue mixing with the fork.
5. Cover the bowl with the lid and let the dough rest for half an hour.
6. Turn the dough out onto a work surface and fold it 2/3 of the way over the rest of the dough then pick up the opposite side and stretch it over the first fold. Repeat the process and place back the dough into the bowl then leave it to rest for half an hour.
7. Take the dough and repeat process as described in step 6.
8. Repeat 2/3 times until the dough springs back and doesn't tear. Cover and let it rest in the fridge overnight.
9. After about 12 hours, divide the dough into two parts and fold them both again making sure to seal them with the palm of your hands. Then place the doughs into two tall plastic containers with lid and leave them to rest at room temperature.
10. Grease two pans, put the doughs into them, gently stretch them towards the edges and corners of the pans and bake.

Tips:

- At step 10, you can turn the doughs out onto a pastry board and then transfer them into the pans.
- Folding helps develop gluten structure and trigger fermentation.
- That's a high hydration dough, so wet hands when working it.
- Lightly flour the work surface to keep dough from sticking.

Dough with a kneading machine

- Place the flour in the bowl of the kneading machine.
- Set it on the lowest speed and let the flour incorporate oxygen for one minute, adding the yeast.
- Set the timer with the desired time from 10 to 16 minutes, up to 18 minutes at most.
- Start the machine at the lowest speed, and add 80% of the total water in the recipe.
- Once the gluten network has formed and the flour has absorbed all the water, add the salt with a little water to ensure that the salt crystals dissolve better.
- Once the salt has been absorbed, raise the machine to the second speed and add the remaining water.
- Once all the water has been absorbed, add any oil and finish the dough until its absorption.

Dough with the home mixer

- Place the flour in the mixer bowl.
- Operate on first speed and allow the flour to oxygenate for 1 minute, mixing in the yeast.
- Start the machine on first speed, and insert 80% of the total water of the recipe.
- As soon as the dough starts to form the gluten mesh and thus to put the mixer under stress, immediately add water so as not to strain the machine too much.
- Once the gluten mesh is formed and the flour has absorbed all the water, add the salt with a little water to allow the salt crystals to dissolve better.
- Once the salt has been absorbed, switch to second speed and add the remaining water.
- Once all the water has been absorbed, add any oil and end mixing when this has been absorbed.

Lighting the wood oven

The Wood Pile

We make a wood pile by stacking: woodlighters, small pieces and slightly larger pieces of wood. The use of the wood holder increases air circulation and thus improves wood combustion.

Lighting and heating

Light the pieces of wood underneath and let them catch fire. Once a good flame is obtained, gradually add more wood and close the oven to raise the temperature. Close the door so that no heat is lost.

Move the fire

With the help of the fire mover we move the fire to one side. It is always best to move the fire to the side opposite the pyrometer, usually to the left.

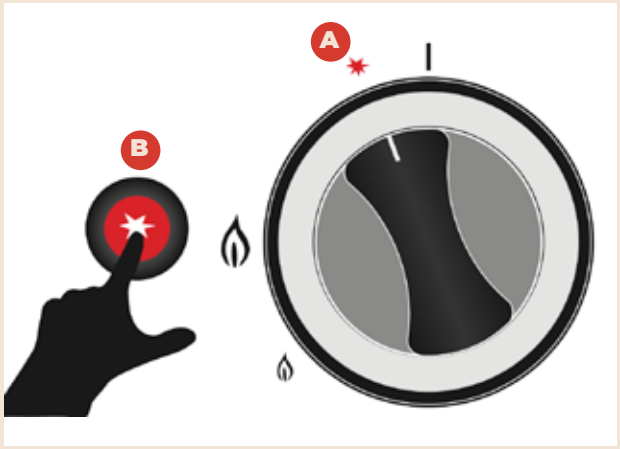
Cleaning the hob

The refractory top can be cleaned with the brush. The heating phase of the oven takes place with the door closed and usually takes between 30 and 40 minutes depending on the size of the oven, frequency of use and environmental conditions.

Lighting the gas oven

Opening the gas

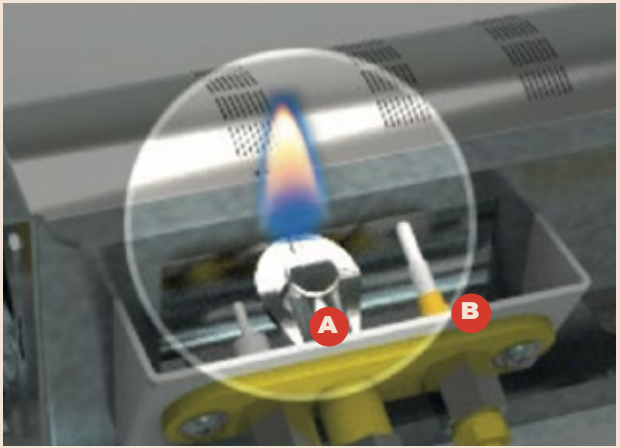
Check the gas and open the cylinder or tap to ensure the flow of gas to the system. Naturally, before opening the gas, make sure the system has been installed correctly.



Lighting the pilot flame

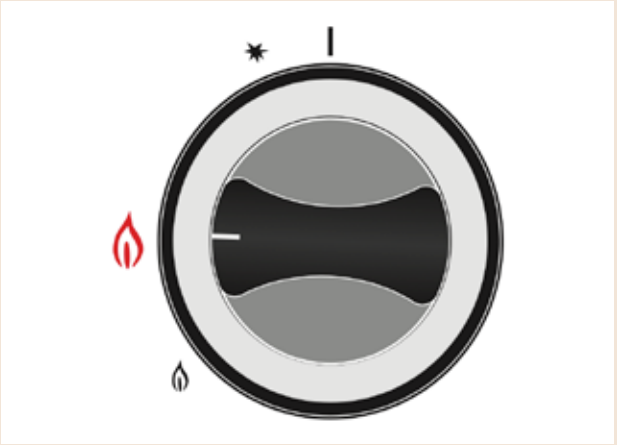
To ignite the pilot flame, press and turn the knob to the spark symbol (A). While holding down the burner knob, simultaneously press the igniter button (B) to ignite the pilot flame.

N.B. The ignition of the pilot light might need several attempts due to the air in the supply line, so be patient.



The thermocouple

Once the pilot flame (C) is lit you will see a small flame. You can then release the igniter button, but you will need to keep the burner knob pressed for a few seconds. This will ensure that the thermocouple (D) is hot enough for the pilot flame to remain lit.



Igniting the burner

Release the burner knob and turn it anti-clockwise until the “high flame” symbol appears. The oven burner is now lit and you can start preheating the oven.


426.5°C
MAX 426.5
MODE
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Measure the temperature of the refractory floor of the ALFA oven.

Once the oven has been turned on, all that remains is to wait for it to reach the temperature necessary to cook the dishes on the menu. *We would like to remind you that to speed up heating times it is always advisable to maintain a high flame with the door closed.*

Two ways exist to read the temperature inside the oven:
1. check the pyrometer located on the front of the oven
2. use a laser thermometer to detect the temperature of the refractory floor

The first case is certainly the quickest and most intuitive, but it risks generating errors. In fact, the pyrometer on the oven detects the temperature of the air inside the oven and not the oven floor. The air temperature varies quickly and therefore a risk exists of reading a temperature that is not constant over time.

Using a laser thermometer instead, the temperature of the oven floor is read, meaning the heat absorbed by the refractory slabs. This measurement is much more accurate and allows you to read a temperature that remains constant for longer.

In the table opposite we have combined some of the main preparations and recommended temperatures.

FOODS	TEMPERATURE	
	°C	°F
Roasts	250-300	482-572
Cakes	180-230	356-446
Bread	250-300	482-572
Oven-baked pasta	200-250	392-482
Oven-baked fish	300-350	572-662
Pizza	370-430	698-806
Roast pork	250-300	482-572
Greens and vegetables	150-200	302-392

Pizza dough

The total leavening for this type of dough is 24 hours. After the first 12 hours in the fridge, remove the dough, form balls and put them back in the fridge for another 5/6 hours. Leaven the balls outside the fridge for the remaining hours. Always consider the room temperature for the second part of the leavening: in summer it will need more time in the fridge, while in winter the balls can also stay out of the fridge longer. Therefore, the 12 hours of the second part of leavening vary depending on the room temperature.

Ingredients
- 200 g (1.6 cups) “type 1” flour
- 800 g (6 3/8 cups) “type 00” flour
- 600 ml (2 1/2 cups) water
- 3 g (1tsp) freeze-dried yeast
- 20 g (3.33 tps) salt
- 20 ml (1.35 tablespoon) oil

Add the two flours in a bowl, then add the freeze-dried yeast. Let the mixture breathe.

Slowly add the water, knead the mixture until the water is absorbed. Add the salt and finally the oil.

Finish kneading on a pastry board.

Put the dough in a dough box and let it rise in the fridge for 12 hours.

Use a pasta cutter to make the dough balls, about 225-250 g (7.94-8.75 oz) each. Place the balls back in the fridge for another 5/6 hours, then continue the leavening outside the fridge for the remaining 5/6 hours.

Toppings and cooking

When adding toppings to pizzas, we must consider the temperatures for cooking each of them.
Take for example sausage, which must be placed above mozzarella, because if it is covered with other ingredients it will not be able to completely cook in two minutes.

With foods that need more time to cook, we suggest lowering the oven temperatures to allow them to cook more slowly, or precooking the food itself. For example, if we wanted to make a pizza with vegetables, we could cook them in the oven first, and then later use them as condiments on the pizza. Here are the toppings that are most appreciated by our students during the ALFA ACADEMY.

The classic **Pizza Margherita** has always been the Queen of pizzas: hand-crushed San Marzano tomatoes as they once were, fresh basil, coarsely chopped fior di latte cheese drained in the refrigerator. A drizzle of extra virgin olive oil.

The **Gricia** pizza is definitely the most requested during our courses: finely chopped guanciale (not transparent), grated Pecorino Romano, pepper and fior di latte cheese. Season the pizza with the guanciale and a sprinkling of pecorino cheese, add pepper and a little bit of mozzarella. A drizzle of oil and into the oven. Once removed, sprinkle with more pecorino cheese and freshly ground pepper. A grating of lime peel also works here.

Another favourite is **Pizza Chef**. You'll need: artichoke cream, guanciale, fior di latte cheese, smoked provola cheese and lastly lemon. Spread a thin layer of artichoke cream on the pizza, add the guanciale, a few pieces of provola and the mozzarella and then place it in the oven. Once removed, grate some fresh lemon peel on the piping-hot pizza.

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