CAMP easy

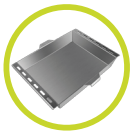
Road CHEF BY CAMP EASY

BiG BERTHA

12 VOLT OVEN

SAVE MONEY, SAVE TIME, EAT WELL

INSTRUCTIONS



BAKING TRAY INCLUDED

VENTILATION HOLES FOR EVEN COOKING

12 MONTHS WARRANTY**

HUGE 13L COOKING CAPACITY

ADDITONAL WIRING REQUIRED

DO NOT CONNECT WITH CIG/MERRIT PLUG

2 REMOWABLE S/S WIRE RACKS

50-180 °C TEMP RANGE

ANDERSON PLUG CONNECTION ONLY

HEAVY DUTY WIRING INSIDE & OUT

2 X HEAVY DUTY TIE DOWN BRACKETS

MOUNT ONTOP OR UNDER

DOUBLE INSILATED DOOR

WEEP HOLES FOR FLAKEY PASTRY

FULLY INSULATED ON 6 SIDES

X-STRONG DOOR CLASP

2 HR CUT OFF TIMER

'ON' INDICATOR LIGHT

TOP OR BOTTTOM OR BOTH ELEMENTS

QUICKER MORE EVEN COOKING

NO REAR VENTIALTION REQUIRED

EASY TO CLEAN

ADJUSTABLE TEMP GAUGE

'OFF' TIMER BELL

Thank you and Congratulations on your purchase of the BIG BERTHA Road Chef 12 Volt oven. We hope you really enjoy using your oven and that it brings you many great meals in some of the most awesome places on earth! Please read this operating manual carefully before starting the device. Keep it in a safe place for future reference. If the device is handed over to another person, this operating manual must be handed over along with the device.

WARNING!

The oven, its outer surfaces and contents that have been in the oven may be hot. Ensure that appropriate precautions are taken before handling the oven, its outer surfaces or contents.

POWER SUPPLY

The BIG BERTHA Road Chef Oven runs from a 12 Volt power supply. Like many high end 240-volt ovens BIG BERTHA has two elements, one underneath the oven box, and one on the top. Each element will independently draw 10 Amps / 120 Watts at 12 volts when operating fully. When both are used at the same time, they will draw 20 Amps / 240 Watts at 12 volts.

The ONLY power option that you must have to power the BIG BETHA is via the supplied Anderson Plug. Other 12 Volt ovens, offer the options of a cigarette lighter or Merit Plug using a vehicle 'cigarette lighter' plug. However, these cannot be used for the BIG BERTHA as the wiring is typically designed to take a maximum of 10 Amp. This wire will overheat, melt, and potentially catch fire is used with the BIG BERTHA. The Anderson plug provides a superior connection and will reduce the chance of a poor connection. The oven is fitted with an internal fuse. If the fuse does blow then there is most likely a problem that you should diagnose and rectify before replacing the fuse.

On the front of the oven is an "On" indicator light. This light will only illuminate when the following criteria are met:

1. There is power reaching the oven,
2. The Element Selection switch is in either the TOP, BOTTOM or BOTH position,
3. The oven Timer is switched on and is counting down, and
4. The Temperature Gauge is switched on.

The oven is fitted with a thermostat so if the desired temperature is met then the light will go off, as it is not heating anymore, until the temperature drops, and the element comes on again.

12 VOLT TIPS AND TRICKS

Operating the BIG BERTHA 12-volt oven is quite different from using a 240-volt oven. One of the biggest differences is that many people are willing to 'have a go' at wiring up a 12-volt system with limited knowledge or understanding, whereas, only a qualified electrician, should ever work on 240-volt wiring.
Below is an overview of 12-volt wiring and is why it is strongly recommended you have your power source and wiring for the BIG BERTH Road Chef 12 Volt Oven professionally installed.

Cable requirements

There are multiple wiring gauge or size measurements making it very confusing. To name a few there are MWG, AWG and B&S, with some going up and others going down. Then many wires are in mm that can or may not include the plastic sheath of varying thicknesses, whereas others are in mm2 (e.g., 3mm = 1.13mm2). Another challenge is the marketing and sales rhetoric, so even if a 12v cable says, "Rated for 50A" (e.g., this on 6mm auto cable), it does not mean that it can run a 50A load properly. It only means that the cable will not physically deteriorate/burn under this load. But it WILL have a massive voltage drop which is what you want to avoid.

There are countless tables that can be accessed via the internet to cross reference each wire size. The one that we are going to concentrate on in mm2 as it shows exactly how much copper there is to carry the current through it.

The first and most important thing you must know is how far the current needs to travel from the power source (e.g., 'house' battery) to the BIG BERTHA oven, including the supplied power cord. That is known as the route length. (NOTE: If power is being supplied to the 'house battery' during the process the distance between it and the primary battery must also be considered in the route length).

While travelling from the source to destination the goal for the voltage drop to be less than 3% (DC 12v). If your wire diameter (mm2) is too small for the route length there will be high voltage drop, putting pressure on all elements in the system that may result in overheating and the potential for melting and/or even fire. Our recommendation is a minimum of 6mm2 for a maximum route length of 2m. From 2m to 5m route length, 6mm2 is acceptable however we would recommend an 8mm2 or greater, as if it is used while driving the voltage is higher than 12v.

If your vehicle is wired incorrectly and the oven is damaged, then it will not be covered by warranty. Your 12 Volt expert or auto electrician should be able to help you select the right size wire to get optimal results.

NOTE: When the power supply is above 12-volts the Amps drawn by the BIG BERTHA elements will INCREASE proportionately. Typically, a fully charged battery will sit at 12.6V and may sit at up to 15 Volts if used while the battery is being charged simultaneously, like when driving.

DO NOT use a voltage step up converter with the BIG BERTHA Road Chef 12-volt Oven. Any damage caused will not be covered by warranty

Voltage Of Your Battery

What voltage is your battery at when you start using your BIG BERTHA oven? Traditional 12v batteries at full charge sit around the 12.6v mark indicating they are healthy and 'full'. If it is less than 12.6 volts an hour after charging you may need to get it checked. When under load the energy drains out of them, and their voltage slowly drops until when they are really flat, they are sitting around the 10.5-11 volts – or lower! If you are starting from a lower voltage point, then this will significantly affect the ability of the oven to get to its top temperature as the battery is struggling to pump out enough energy to allow it to heat up.

A good analogy is if a dam is 100% full then when you lower the flood gates then the maximum amount of water is flowing out when the gates are at a certain level. If the dam is only 80% full then when the gates are at the same point less water will flow out even

though the gate is in the same place.

If your oven is not reaching full temperature use a multi meter or similar device to check the voltage before you start your cook, and then throughout the cook. If it is getting below 12-volts at any point during the cook then then it will not be able to heat at its optimum and you will need to consider the batteries health, size or charging options.

Ongoing charge of battery

Many people use the BIG BERTHA oven when they are driving, others use it while their engine is not running, using solar panels. Others rely on the energy stored in a battery bank or something similar. Whilst your battery is connected to a (traditional) running vehicle or appropriate solar panel in optimum conditions it is being continuously recharged and will sit around 13.7-14.7 volts, while a battery bank is not. When a battery is being recharged it is (usually) able to pass on the highest amount of energy to appliances like the BIG BERTHA so it can operate at its full potential. If the battery is not receiving charge then its ability to continuously operate at its full potential decreases over time, especially if more than one appliance is being used, like a fridge or lights, at the same time.

Size/type of battery

The 'size' or Amp hour and battery type or chemistry also influence the ability of the battery to store energy and release it over an extended period. If you are going to use BOTH elements of the BIG BERTHA, we suggest a minimum of two fully charged 120 Ah deep cell battery to ensure a consistent 2+ hour cook. If you use only ONE of the elements, then a single battery will be sufficient for 2+ hour cook

Age of battery

Like most things in life, the older something gets the harder it finds it to perform at its optimum. An AGM glass battery will last anywhere from four to seven years, while a deep cycle gel cell battery can last from two to five years.

Connection quality

The quality of connections is a much under rated element in the transfer of energy in a 12v system. The optimum connection for a BIG BERTHA Oven is through the supplied Anderson Plug connection, however it can be removed and hard wired using appropriate connections without voiding the warranty.

Running multiple appliances

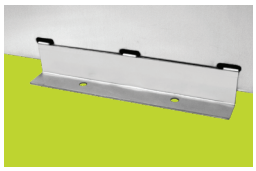
When you are running multiple appliances you again need to consider the cabling that you are using. Using an analogy, if you have a 10cm pipe that can supply your pump 100l per minute you cannot then go and add another pump that also requires 100l per minute. To do this you will need to increase the size of the pipe or you will have 2 pumps only getting 50l per minute. So, if you want to run your phone, a fridge, UHF, maybe a dashcam or GPS and then try and add the BIG BERTHA to it you will need to increase the size of the wiring, or the pipe, from the battery.

SET UP

Setting up and installation of your BIG BERTHA oven is simple.

Once you have organised an appropriate power supply, simply plug your BIG BERTHA oven in, decide if you want to use one or two elements, set your temperature gauge to the required temperature, turn the timer switch on for the time you will need to cook and after preheating the oven, put your food in. It really is that simple! Here are a few other things for you to consider when setting your oven up.

1. Your oven comes with a set of 'tie down' clamps that can be used to securely attach it in your vehicle, boat, or the like. There are slots at the top and bottom of the oven allowing you to secure it to a shelf or roof of your vehicle. Simply insert the three prongs into the slots in the side of the oven and screw the brackets down. Periodically check the attachment to ensure it has not become loose.



2. The baking racks can slide in and out of the oven making it easier for you to reach your food. Be aware that the baking racks get hot and appropriate hand protection should be used when handling them. The trays do not have a stopper on them; however, they should ONLY be extended so that 1/3rd of the rack is out of the oven. If you extend it further than this the tray may buckle and/or fall out causing injury.
3. If the oven is 'rattling' when you are driving, when the oven and racks are cool, you can gently pinch down the arms on the sides of the racks so that they hold tightly onto the arms inside the oven.
4. BIG BERTHA comes supplied with a baking tray that is designed to create optimum cooking inside your oven. As the oven is not fan forced it relies on natural convection, so the Baking Tray allows for maximum air flow around the meal you are cooking. Reduced air flow allows cooler air to build up near the meal surfaces. By allowing hot air past the product, it picks up the heat faster cooking more evenly.
5. The oven does not require any ventilation at the rear, sides, top or bottom and as such can safely be recessed.
6. The oven is insulated on 5 sides using fibreglass insulation. This should keep the outside temperature below 40°C although this can vary depending on the ambient temperature. The door is double insulated through a double wall and silicone inner which minimises its ability to heat it up. However, over a longer cook or in an area with reduced ventilation it may become hot and care should be taken.

COOKING

The BIG BERTHA 12-volt oven gives you the choice of cooking with just the TOP element, just the BOTTOM element or BOTH at the same time. The benefit of this is you can tailor it to what you are cooking. Each person likes their food prepared differently so some experimentation will be required but as a rule using the TOP elements is great for things that need grilling like nachos or pizzas. The BOTTOM element is great for baking and will make great scones. Using BOTH elements is the best for roasting or anything where you need all round heat.

Determine what will work best for you, the oven racks, or the baking tray. Wet food like chicken wings or roasts are great for the baking tray, and if they are going to be particularly wet or the road very rough, we recommend the use of an oven bag to minimise spills. The baking tray is designed to hang on the top rail of the oven but can sit on the bottom rack or the base of the oven for more direct heat. The racks are ideal for pies and anything you want to crisp up from the increased air movement around them.

Next set your BIG BERTHA oven to the desired temperature with 180°C the approximate maximum temperature. Predictably when using the BOTH function, the oven will heat up quicker and maintain the temperature more evenly than using a single element. Most modern recipes and instructions

provide cooking time for a fan forced oven. As the BIG BERTHA is not fan forced it will take longer to create similar results. To achieve the best results, we suggest you preheat the oven for 20 minutes on BOTH and, 30 minutes on a single element, especially if you are cooking with fresh ingredients. To give you a rough idea it will take you about 20/30 minutes preheating for the oven to get to 150 degrees for both/single elements. The BIG BERTHA oven's heat source is from elements directly against the top and bottom of the inside of the oven. The heat is transferred around the oven through conduction of the metal and convection in the air. During cooking at high temperatures, it is natural for the top and/or bottom of the oven to 'bow' up.

Your oven's heating element requires a high amount of heat, so the metal naturally expands. As the four corners of the top/base are turned at 90 degrees the expansion is restricted focusing the expansion, with the height of the racks on the bottom designed to consider the bowing. Like all ovens there are hot and cool spots, so we recommend moving the items being cooked around during the cook for optimal results.

Tips include: Place a silicone baking mat (approximately 230 x 170mm) in the centre of the oven base. Or place the top rack on top of the bottom rack to help the heat circulate around the oven more evenly. We recommend that you do not over fill the oven, which reduces air flow and to rotate your food between shelves and on the shelves throughout the cook to avoid hot spots. Food in the baking tray or similar coverings can be placed directly onto the bottom of the oven however you should check it regularly as it is easy to burn food using this method. If you are reheating or cooking frozen food, we suggest that you rotate your food between shelves and on the shelves throughout the cook to avoid the outside burning before the middle is defrosted.

What you put into the oven

What you put in the BIG BERTHA significantly affects the amount of time it takes to cook it as does the temperature selected and the elements selected to cook with. The time required to cook a roast is not always the same! Even in your home oven it will take 1.5 hrs to do a 1kg pork roast, but it will take 3.5 hrs to do a 3 kg roast. So, if you put 2 frozen pies into the BIG BERTHA it will take longer than 2 defrosted pies. Similarly, if you bake in your BBQ heating with 4 elements burning will cook quicker than only 2. A few good rules of thumb are to try not to 'overload' the oven, if you are 'loading it up' then always try to defrost the items before putting them into the oven and rotate them between the top and bottom shelves and the front and back throughout the cook.

Oven temperature

While BIG BERTHA is an oven, it is a 12-volt oven, not a 240-volt oven like you have in your house. While it is very efficient at turning 12 volts of energy into heat so that you can bake, roast, and reheat, on the road, it is not a 240-volt oven, so it is important not to expect the same performance. It will take about 20/30 minutes to preheat your oven to 150 degrees C. After the first 20/30 minutes the incremental increase in temperature reduces to about 10 degrees per 10 minutes with the maximum temperature achieved after about 50— 60 minutes. The more food you put in your oven, and the lower the temperature (if its frozen or room temperature) the longer the cooking time will be.

How you measure temperature

There are lots of different methods people will use to measure the temperature of an oven. What you are looking to measure is the air temperature, not the surface temperature inside the oven. The oven does have a thermostat that will turn the oven on and off when it reaches/falls below temperatures. This cannot be accurately used as a temperature gauge by watching where the light turns off. If you want to check the temperature, we recommend using one of the small gauges that can be purchased at most kitchen shops. Get the smallest one and place it on the bottom rack of the oven. If you want to take it to the next level, there are numerous digital and Bluetooth temperatures gauges on the market. The trick with these is to make the opening for the wire as small as possible (bottom of the latch side of the door) and that the probe does not sitting on the base of the oven as it needs to be measuring air temperature.

12 MONTH OVEN GUARANTEE

Please take the time to read about what your guarantee offers you.

The BIG BERTHA oven comes with a guarantee designed to protect you as our valued customer. RPM Innovations Pty Ltd; will repair or replace the oven, at their discretion should it fail due to faulty materials or manufacture for a period of 1 year from the date of sale.

1. The Guarantee is subject to the following conditions:
2. The Guarantee only applies to the original purchaser who purchased the oven from an approved retailer in Australia or New Zealand.
3. The Guarantee does not apply if the oven has been used for anything other than reasonable personal cooking. Commercial or continuous use are expressly excluded.
4. Damage due to normal wear and tear, accidents, acts of God, negligence, or failure by the purchaser to ensure that instructions for use and care are observed, and any other cause reasonably beyond the control of RPM Innovations Pty Ltd are not covered.
5. If redress is sought under the terms of this Guarantee, then the oven and all its associated parts must be returned by the purchaser to the outlet from where it was purchased, within the Guarantee period, in a clean and acceptable manner and with proof of purchase.
6. All transport costs and any other indirect costs are excluded from the Guarantee.
7. RPM Innovations Pty Ltd; reserves the right to make a reasonable charge for repairs which it determines are not within the scope of the Guarantee.
8. The Guarantee does not limit, modify, or exclude any rights under any law if doing so would contravene that law or make any part of this Guarantee invalid. However, RPM Innovations:

a. Excludes (to the extent permitted by applicable law) all conditions and warranties that might otherwise be implied; and

b. Limits its liability for breach of any such condition or Guarantee that it cannot exclude together with its liability under the Guarantee, to repairing or replacing the Goods, or paying the cost of having the Goods repaired or replaced (at RPM Innovations Pty Ltd option).

This oven has been made with meticulous care and attention to detail. Providing it is properly looked after, it will bring you many great meals in some of the most amazing places on earth!






BIG BERTHA

CAMP easy

Road CHEF BY CAMP EASY

RPM INNOVATIONS

RPM Innovations Pty Ltd
PO Box 416
Carina Queensland 4152
Phone: 07 3114 2003
Fax: 07 3177 7897
Email: luke@rpminnovations.com.au
Web: www.rpminnovations.com.au