SPECFLUE

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Providing Heat for Glamping Applications

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More and more people who consider themselves 'too posh to pitch' are opting for a new way of camping that involves less effort and greater extravagance. Indeed, a revolution is taking place in the camping sector as the popularity of glamping (luxury camping) rises at a spectacular rate. This trend has prompted a host of enlightened entrepreneurs to enter this booming and potentially highly profitable market. But – with comfort being a key factor – what heating provision should glamping accommodation contain? This guide has an answer.

Glamorous camping – or glamping – offers a potentially lucrative revenue stream for those bold enough to invest in this relatively new type of holiday experience.

Glamping differs from traditional camping in that it focuses on comfort and luxury. Glamping holiday accommodation varies greatly depending on the location, but includes bell tents, cabins, yurts, shepherds' huts, boats and pods. You can even stay in a converted Boeing 767 in Ireland (http://quirkyglamping.town.ie).

However, all these different forms share two specific qualities – they are located in the great outdoors and material comforts (from a real bed and an electrical supply to hot & cold running water and heating) come as standard.

Overseas glamping can offer an especially spectacular experience, but at an eye-watering price. For example, The White Desert Camp in Antarctica features insulated pods that cost almost £10,000 a night. The Beverly Wilshire, a Four Seasons Hotel in Los Angeles – where a tent has been installed on the roof – offers 'urban' glamping from £2,669 a night. However, more modest domestic glamping arrangements can also offer a rewarding experience.

Glamping is rising in popularity and this is starting to show in its financial returns. The outdoor hospitality industry saw an increase of 1% in 2016, in a year on year comparison, according to IBIS Worldwide, which doesn't sound much, but equates to more than £2 billion revenue.

And research organisation Mintel has estimated that the total number of camping/glamping trips is expected to rise to 17.9 million in 2017 and to more than 21 million in 2020 with Britain's camping and caravanning market worth £3.2 billion by 2020. This is essentially down to three big reasons.

- The decision on Brexit has led to a fall in value of the pound. The result is that families can now easily end up paying £300 more for a standard two-week package holiday to Europe, plus around an additional £150 on spending money. This has had a big influence on the rise in camping trips as budget-conscious travelers look for ways to make their holiday money go further.

- The government has removed the automatic right to tow a caravan. Drivers who passed a car test on or after 1 January 1997 are required to pass an additional driving test in order to gain entitlement to tow a caravan. This has encouraged younger people to opt for camping or glamping instead.

- Millennials have a greater awareness of environmental issues than previous generations; buying locally reduces our carbon footprint so 'staycations' (vacations taken in the UK) have increased and a large proportion of these holidays involve camping/glamping.

There are many different options when it comes to heating sources for a glamping holiday, but one of the most natural ways (and therefore, perhaps, most in keeping with the notion of the 'getting back to nature' ambiance that glamping implies) is a wood burning stove.

Wood burners have a host of benefits – both environmental and practical. For example, a modern stove will reduce emissions by 90% compared with an open fire and by 84% compared with a stove manufactured 10 years or more ago.

Wood logs are a renewable fuel provided they are bought from a reputable supplier who sources from well managed woodland. And burning wood is pretty much carbon neutral (the carbon dioxide given off during combustion is similar to that absorbed by the tree providing that wood during its growth)

Furthermore, wood burners are exceptionally reliable – even if there's a power cut, a solid fuel appliance can offer a constant source of heat at any time.

Installer's Guide

There are a number of guidelines that can help you, as an installer, select and fit the right wood burning stove for the job. First, ensure that the stove is strong and, if the glamping structure is to be moved frequently, is relatively compact and lightweight so that it can be transported easily.

Secondly, ensure the stove is not oversized in terms of output. If the area needs, say, 6kW of heat it is better to work a smaller stove hard than let a 10kW stove tick over.

Thirdly, all stoves – including those used for glamping – need a flue to discharge the smoke caused by wood burning. The stove itself and the flue pipe will be hot and could ignite the fabric material of the tent.

Particularly if the stove is to be placed in a fabric structure, think about positioning and safety in terms of distances to combustible materials. Stove and flue manufacturers issue guidance on distances to combustible materials, which must be adhered to.

A small section of canvas can be replaced with an aluminium panel to which is sealed a silicon cone. The stove flue pipe can simply be slid through this safe, watertight seal when the tent is assembled. It's also worth installing a spark arrester on the top of the flue if the glamping accommodation is a tent to prevent hot sparks landing on the fabric.

Combustible materials other than the tent structure itself must also be considered, such as front distances to a sofa, and so on. And curtains and drapes must be prevented from blowing into this 'keep clear' zone.

Furthermore, the stove itself needs to be placed on a flat, hard surface such as a large tile or piece of slate to keep it steady. We also recommend the use of flame retardant matting as a secondary measure to protect the groundsheet from stray embers. And remove all labels from the stove and flue kit components before use. More installation tips can be found in the box – Tips for safe stove installation.

However, fire is not the only safety risk with wood burning stoves. Carbon monoxide poisoning is also an ever-present danger where there is a wood burner. There have been a number of tragic deaths where people have brought barbeques into the tent so it is important to ensure the tent is well ventilated. Carbon monoxide is odourless and colourless and tasteless, and is toxic to humans at concentrations above around 35 parts per million.

You can't rely on a carbon monoxide detector to keep the occupants safe in a tent; they may be useful at home, in a caravan, in a log cabin or in a motorhome, but they are not designed for tent conditions. Ideally, tents should be designed to let the air flow through the tent so you have a supply of fresh air.

However, even in tents – and certainly in more substantial structures – it's important to have a means of expelling noxious fumes. Usually, this is in the form of a metal flue. Before specifying this, however, consider how often you the tent will be moved. The single skin flue is lighter and therefore easier to transport, but you would need to leave a circle three times the diameter of the flue to anything combustible. With a twin-wall flue, the distance from the flue to the canvas material can be reduced.

The flue pipe, often a combination of single skin and twin wall insulated, should ideally run up to just above the height of the tent to ensure a good draw and a rain cap stops rain entry at the top.

Flue pipes, incidentally, must have the same diameter or equivalent cross sectional area as the flue outlet on the appliance and should not be smaller than the size recommended by the appliance manufacturer.

As a general rule, around 1kW of heat is needed for each 14 cubic metres of space in the room. Modern stoves are particularly efficient with at least three quarters of the generated heat entering the room (the rest is expelled through the flue).

Meanwhile, Ecodesign – the European-wide programme to lower emissions – is due to be implemented on 1 January 2022 for wood burning and multi fuel stoves. However, the Stove Industry Alliance (SIA), supported by DEFRA, has pre-empted this by launching the Ecodesign Ready Scheme.

The main manufacturers in the SIA have decided to release stoves that will meet the lower emission limits now, and from 2020 to only manufacture wood-burning stoves that meet the new Ecodesign criteria, two years ahead of schedule.

This scheme has been hailed by the SIA as “a new landmark in the increasing environmental benefits of wood burning stoves”. It adds: “Particulate emissions are organic particles that come from incomplete combustion of wood. Ecodesign Ready stoves have been engineered to burn wood more completely. The targeted introduction of combustion air at higher levels in the fire box of the stoves, reignites the particles of wood before they can leave the stove.”

A list of Ecodesign Ready stoves can be viewed here: http://www.hetas.co.uk/ecodesign-ready/

As well as choosing the right product, selecting the right supplier also plays a large part in a successful stove installation with its after-sales support and delivery performance important selection criteria. Specflue, for example, has more than 8,700 sq m of warehousing and holds over £2 million-worth of stoves, flue and chimney products. Nearly all stocked products can be delivered next day anywhere within the UK mainland.

The company’s technical team can provide a full and free CAD design service and offer advice on all domestic and commercial installations.

Tips for Safe Stove Installation

- We recommend that a competent person with Hetas approval and appropriate qualifications should install the appliance and flue.
- Any appliance rated at 5kW or above must have ventilation into the room, which can’t be shut off.
- Position the stove away from exits, and not too close to the walls or roof of a tent/combustible walls.
- The appliance must be sited on a hearth, which needs to extend at least 230mm in front of the stove.
- If the accommodation is a ‘hard’ structure rather than a canvas tent, a carbon monoxide alarm must be placed into the tent in accordance with the manufacturer’s instructions regarding the distances from the stove. This should be tested weekly.

Case Study

A challenging project has been completed in Wales employing a stylish, high-performance pellet boiler and accessories supplied by Specflue.

The leading flues, chimneys and renewable heating specialist delivered an MCZ Ego pellet stove and Schiedel flue system to heat a luxury geodesic dome used for glamping in Lawrenny on the Pembroke peninsula. Glamping is a form of camping involving accommodation and facilities more luxurious than those associated with traditional camping.

Glamping domes provide a safe and weatherproof shelter that can be used all year round in most environments. Their shape makes them super strong and resistant to strong winds and heavy snow. However, heating what is effectively a tent safely, effectively and conveniently was a real test for installer Little Green Planet.

The company's managing director, Jack Johnson, explained: "Originally, our customer was interested in installing a log burner in their geodome to provide heating and as a central focus for their guests.

"We did discuss the idea of a wood burner. However, there were issues with proximity to the canvas outer skin and wooden floor to consider and, as you can never truly 'fool proof' a wood burner, a pellet stove ticked a number of boxes from a safety aspect.

"We've also set up smartphone access to enable our customer to fire up the appliance ahead of customers arriving so they are welcomed into a warm space."

The MCZ Ego pellet stove is made with a steel structure, cast iron top and steel sides. It also features a cast iron brazier, combustion is managed automatically with Active+ (an intelligent combustion management system that allows the user to communicate with the stove via a smart phone) and remote control with room thermostat as standard.

The stove can be easily managed by remote control with few buttons, but lots of functions. In addition to the normal daily and weekly programming functions, the user can programme different temperatures in different time slots during the day. A high level of comfort is assured since the thermostat function allows the temperature to be measured in precisely the right spot.

Meanwhile, the flue for this unusual installation was supplied by Specflue from the Schiedel Chimney Systems range. This company is a leading flue and chimney manufacturer in the UK and a world brand, providing innovative and tailor-made solutions for customers that are both energy efficient and future-proof.

Providing Heat for Glamping Applications

Although it emphasises the outdoor life, glamping accommodation is more like a hotel than a traditional tent and this begs a fundamental question about how to safely heat the space in a way that reflects its 'back-to-nature' character. There are a number of guidelines that can help you, as a glamping customer, use a stove safely.

First, an appliance should never be left to 'slumber' (filling the stove with fuel before going to bed and then allowing it to tick over for several hours at a low temperature).

Secondly, be careful when lighting the fire. Firelighters rather than newspapers, etc., should be used for ignition because newspapers tend to create burning embers which can fall back down onto the fabric of a tent and start a fire. That, incidentally, is why it pays to have a means of extinguishing the fire quickly if necessary.

Thirdly, don't burn general rubbish. This can give off toxic products which can cause harm to health, and cause damage to the appliance and flue. Only use Hetas-approved fuel and ensure all wood is seasoned or kiln dried so that the moisture content is not greater than 20% (freshly cut wood has moisture content between 60 and 80%).

The Stove Industry Alliance (SIA) has been working with Woodsure (the UK's wood fuel accreditation scheme) and Hetas, as well as with the main suppliers of bagged logs, to create a brand called 'Ready to Burn'.

The initiative is for wood log producers having a distinct certification category for dry firewood logs. So they are able to demonstrate through audit and fuel testing that wood fuel labelled 'Ready to Burn' contains less than 25% moisture content.

Fourthly, never leave the stove unattended when it is lit and don't allow children or animals close to the stove when it is in use. Also, don't let children, or an adult under the influence of drugs or alcohol to operate the stove.

Fifthly, wood should be burnt on a bed of ash, but the remainder should be cleaned out every four to five fires. This ash should be removed in a metal bucket and disposed of in a safe way. Ash and embers must not be left inside because they are a source of potentially deadly carbon monoxide fumes.

And, finally, blackened glass is an indication that the appliance is not being used correctly, and should be cleaned and investigated as to why this is occurring.

Anybody can install a wood burning stove provided they comply with certain criteria – there is no law that insists they must be fitted by a professional. And planning permission is not usually required to fit a stove. However, log burners are covered by the building regulations in the UK and are safety critical devices. That's why we recommend they are connected by a professional or, at the very least, that a professional is consulted before the project is started.

A list of competent stove installers can be found on the HETAS website – https://www.hetas.co.uk/find-installer/.

As well as offering registration for retailers and chimney sweeps, and approval of appliances and fuels, not for profit organisation Hetas runs a competent person scheme for installers of biomass and solid fuel heating.

Other competent person schemes are operated by the Association of Plumbing and Heating Contractors, Building Engineering Services Competence Accreditation, NAPIT and NICEIC.

The relevant legislation relating to stove installation is outlined in Approved Document J of the Building Regulations – Combustion appliances and fuel storage systems (https://bit.ly/2gbGi5r). This specifies that fitting a new stove or chimney comes under building control.

Lighting Your Stove

To light a wood burning stove effectively, adopt the following procedure:

- Open air vents and airwash controls on the stove.
- Place firelighters and dry kindling (small pieces of wood and/or twigs) on the fire bed.
- Light the firelighters and this will, in turn, ignite the kindling which will begin to burn vigorously.
- Leave the wood burner door slightly open to increase the 'flue pull' and avoid condensation building up on the inside of the glass.
- Gradually add larger and larger pieces of wood to build a stable fire bed. Be careful not to add too many logs because this may smother the fire. Do not load fuel above the log guard, but place two or three logs on the fire at a time.
- Once the fire is established, shut the door, close the air vents and add more, larger pieces of wood as required.
- A little smoke in a wood burner is good, but beware of dense, black smoke which is a sign of poor combustion.
- A small, hot fire is much more efficient than a large slow-burning one. That's why you should look for a hot, fast burn because this is the cleanest, most efficient way of running the stove.

Safety Checklist

Hetas recommends a series of steps to ensure safe use of a wood burning stove. These include:

- Ensure you have a copy of the manufacturer's instruction manual so that you can refer to it for use and safety information.
- Always use the right fuel for the appliance – as recommended by the manufacturer.
- Keep all combustibles, including logs, at a safe distance from the stove.
- Make sure air ventilation grilles/flues are not blocked.
- Don't keep the wood burner working at night.
- Securely fit a fireguard to protect children and pets.
- Ensure the audible carbon monoxide (CO) monitor works.
- Early symptoms of CO poisoning include headaches, collapse, breathlessness, nausea, drowsiness, chest and stomach pains and erratic behavior. If you feel unwell, consult a medical professional immediately.
- Ensure that the stove has an up-to-date service certificate.