M2

Small Stoves

Outdoor Cooking: Stoves

There are many different sorts of outdoor stove. In The Boys' Brigade, other than at static camps, the varieties of stoves we will use outdoors are mainly of the portable, one-burner camping stove type. Within this group however, there are a number of methods of providing heat. These fall into the broad categories of Solid, Liquid ("reservoir" and pressurized) and Gas. A brief description of some of the stoves in each category is given below.

Solid Fuel Stoves

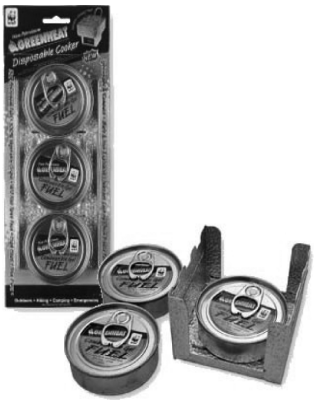
Solid fuel has long been a convenient cooking material. From the earliest days, food will have been cooked on an open fire – usually fuelled by readily available combustible materials such as wood, bark, animal dung etc. Charcoal, Peat and Coal were used to fuel cookers and ovens.

Modern solid fuel cookers tend to be small, pocket sized devices which hold pieces of specially produced solid fuel (hexamine). Small, portable wood-burning stoves are also available and area possible alternative for use where dry wood is readily available.

Advantages: Small, Light, Easy to light and operate, Fuel is easy to handle

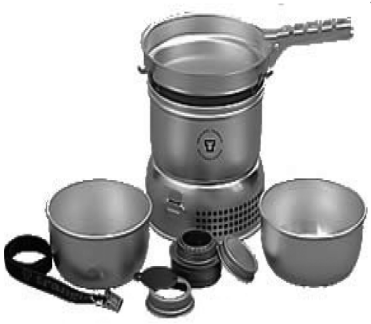
Disadvantages: Limited temperature control, requires separate pans, hard to extinguish. Fuel not widely available.

Greenheat™ produce a combustible gel that can be used in a similar manner to the solid fuel cooker. This is easier to extinguish as it can be suffocated in a similar manner to the Trangia™ liquid fuel system described below. They also produce a small cooker that fits their fuel cells.



Liquid: Reservoir / Spirit Stoves

Trangia™, and similar stoves use a pool or reservoir of inflammable liquid which is burned to produce heat. The Trangia™ system comes complete with pans, and a shield which protects the flame from the wind and holds the pans above the flame. Recently, Trangia™ have produced gas burners to fit their system. Greenheat™ have also produced their gel in a container which fits the Trangia™ system.



Advantages: Relatively light, Easy to light and operate, Fuel (methylated spirits) is widely available and relatively safe and easy to handle.
Pans & cooker fit together for storage & transport. Can be used with greenheat™ fuel cells.

Disadvantages: Limited temperature control, hard to extinguish, liquid fuel is easily spilt and needs to be carried separately in an appropriate container.

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Liquid: Pressure Stoves

Pressure stoves work by forcing liquid fuel under pressure (often through a pre-heat tube, where it is vaporized) through a nozzle, where it is turned into a fine aerosol and mixed with air, then into a burner, similar to that on a gas cooker, where it burns fiercely. The original Primus™ and Optimus™ stoves used paraffin as a fuel. This waxy liquid was hard to ignite at room temperature (or below) and required the stove to be "primed" (by burning a more inflammable solid or liquid in a tray to pre-heat the burner, and so cause the paraffin to be vaporized as it was forced out). Pressure is applied by pumping air into the sealed container holding the fuel.

More recently, pressure stoves have been produced that use unleaded petrol as a fuel. This is more readily available, and easier to light than paraffin. The stove does not need to be primed with another fuel, but takes a few moments to reach the ideal operating temperature. Petrol is forced through a pre-heating tube which passes close to the flame, so the stove primes itself. Coleman™ also produce a fuel that can be used in preference to petrol.

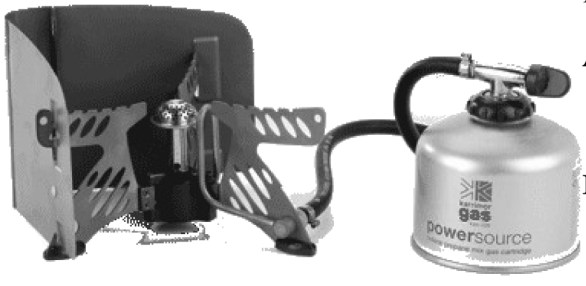
This type of stove is available in several formats; with integrated fuel tank, or separate pressurized fuel bottle; the latter can also be used (with the appropriate adapter) with compressed gas.

Advantages: Fuel (unleaded petrol) is widely available. This type of stove is very efficient, and controllable. Some multi-fuel stoves will work with many different liquids &gases.

Disadvantages: Liquid fuel is easily spilt and needs to be carried separately in an appropriate container. Paraffin is not easy to light. Petrol and similar fuels are volatile, with potentially explosive fumes. Pans must be carried separately.

Gas Stoves

These are probably the most common camping stoves in use today. They use propane or butane gas (or a mixture of the two) in a pressurized canister. Sometimes, this is pierced when mounted in the stove, or attached with a re-sealable threaded connector. Like the pressurized liquid stoves, the gas canister may be attached below the burner, or connected by a flexible hose. Operation is very simple, and a consistent, clean flame is produced.



Advantages: Fuel is widely available. Very versatile, easy to use, and controllable.

Disadvantages: Gas is explosive and needs to be handled appropriately. Does not work well at high altitude. Pans must be carried separately.