Heat guns

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Electric heat guns have now largely replaced the 'old fashion' paraffin and bottled gas blowlamps for stripping paint on timber. The paraffin and bottled gas blowlamps still have a place in the tool kit where electricity is not readily available but they have to be used with care to avoid scorching the wood, setting fire to the stripped paint or cracking the glass when working on a window frame

The hot air flow of a heat gun is less dangerous than a naked flame but it can still cause highly inflammable items to catch fire, crack glass and injury if directed onto skin. One great advantage is that the heat is almost instantaneous so the heat gun can be switched off during pauses in the work while the flame blowlamps have the inconvenience of needing to be relit if the flame is extinguished,

The electric heat guns now available are lightweight, easy-to-use tools which make it far less likely to scorch wood or crack glass when used correctly to strip paint.

How heat guns work

Heat guns look a lot like hair dryers - but, as many instructions thoughtfully point out, should never be used for drying hair! The method of operation of a hot air gun is similar to a hair dryer: a fan pulls air into the body of the tool and drives it across an electric heating element and out through a nozzle.

For stripping paint, the heated air is directed onto the painted surface, causing it to soften so that it can be easily stripped off - either by using a stripping knife or hook. For best results it is best to work up the surface with the heat gun above the stripping tool, softening the paint just before the stripping tool reaches it. The tool is used one-handed, with the other hand to hold the stripping tool.

Some heat guns can be used sitting on a bench so that two hands are free to use the hot air for other applications.

Temperature settings

Very basic heat guns have just one heat setting and one fan speed and are designed primarily for paint stripping. More complicated models have two or three heat settings or even fully variable adjustment with in a range, together with a choice of two, three or variable speeds of air flow.

The effective temperature of any heat gun can be reduced by holding it further away from the surface, but having variable settings gives more choice.

For paint stripping, the maximum speed and the maximum air flow is generally required - these settings are also needed for other jobs such as soldering plumbing joints and freeing rusty nuts. There are other uses of the heat gun where having lower air flows and/or lower temperatures can be useful. Other uses for the heat gun include:

- drying paint or varnish - 30 to 130 °C - care has to be taken as dust particles may be blown onto the paint/varnish.
- drying out damp wood (before filling or painting) - around 100 to 200°C.
- softening adhesive (such as when applying worktop edge trim or lifting floor tiles) - 300 to 400°C.
- bending plastic pipes - 200 to 300°C.
- heat-shrinking plastic film - 200 to 300°C.
- welding some plastics - 330 to 400°C.

A heat gun should always be used with care around copper plumbing where solder connectors have been used as the heat can melt the solder and weaken the joints.

Special nozzles are available for most models of heat gun for specific uses other than stripping paint.

Heat Gun features

As such a simple tool, there are not many differences between one model of heat gun and another - but there are some features which are important.

- Wattage - commonly from 1000W to 2000W (a measure of the power of the gun). Providing that there are heat and/or airflow controls, the higher the wattage, the better.
- Main control switch - usually mounted on the front of the pistol grip, and normally a 'dead man' switch so that power is switched off when the finger pressure is removed - an ideal safety feature as the heat gun stops if it is accidentally dropped.
- Temperature setting - at least 500°C is needed for stripping paint - the lower the bottom end of the range the more useful. A choice of controls make the tool more useful.
- Airflow setting - having variable or more than one speed makes the tool more versatile.
- Thermal cut out - this will switch off the tool if it becomes overheated. If this occurs, it indicates a fault in the tool or method of use - for safety, the fault must be identified and corrected before the heat gun is again used.
- Flex length - lengths of 2.5 to 3 m are normally fitted, this means that when using an extension lead, the tool can be used at the full reach without having the socket hanging in mid air.
- Hanging hook - useful for storing the tool.
- Surface stand - this enables the heat gun to be safety 'rested' during pauses in the work and after uses. It also allows the gun to be used 'hands-free' when two hands are required on the work piece (such as when bending a plastic pipe).
- Nozzles - most heat guns have a range of nozzles that can be fitted for specific uses, generally these need to be purchased separately. The main types of nozzles are:

1. Reducer nozzle - when you want to concentrate the heat onto a specific area.
2. Reflector nozzle - wraps round a plastic or copper pipe to spread the heat around the pipe surface.
3. Flat nozzle - for spreading the hot air over a wider narrower area.
4. Glass protector nozzle - for use when stripping paint on a window to keep the direct heat off the glass.

Safety with heat guns

Although safer than using a naked-flame blowlamp, care is still required when using a heat gun. Specific point are:

- Because of the power of these tools (up to 2000W), when an extension lead is necessary, only use a lead rated at 10 amp or greater and always completely unwind the lead.
- Never obstruct or cover the air inlet grills. If the air flow is reduced the heat gun will overheat and possible catch fire.
- Never operate the heat gun with the outlet nozzle hard up against a surface, this will reduce the air and can have the same effect as obstructing the air inlet grills,
- Do not use a heat gun near inflammable materials.
- Always switch the tool off before putting it down on any surface.
- Allow the tool to cool before storing it.
- Do not place the nozzle next to anything whilst it is hot.
- Never touch the hot metal nozzle with clothing or skin.
- Do not use for stripping lead-based paints.
- Do not allow any paint to stick to the nozzle - and if some paint does stick, allow the gun to cool down and remove the paint.
- Do not look down the nozzle while the gun is turned on.
- Do not insert anything down the nozzle with the gun.