

HEATBASE Ltd FACTSHEET 6

Remote Sensing Fire valves

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Although though the chance of an Oil boiler or cooker catching fire is very remote, there is always a possibility it could happen. It is a legal requirement that all Oil fired appliances installed after 1st April 2002 have a remote sensing fire valve. Installations prior to 2002 cannot have this requirement forced upon them, but some Buildings Insurances may be void if an installation does not meet current regulations, therefore you should check with your Insurance Company whether you are required to install one.

The sensor for the fire valve is usually positioned inside the appliance casing (but sometimes in the room near to the appliance: e.g. uncased model boiler or fire/room heaters or secondary fire valves for AGA type cookers). The body of the fire valve should be positioned outside the building where the oil line enters (in some cases inside immediately where the oil line enters: e.g. if the oil supply line has been brought underground and up through a solid floor). The sensor and valve body are joined together by a thin copper capillary wire and if this capillary becomes damaged the fuel supply will also be shut off to the appliance. Although external boilers had a requirement that the body of the fire valve should be positioned at least 1 metre away from the appliance, this has been relaxed in British Standard 5410 part 1 2014; so it only needs to be positioned to shut off the fuel supply outside of the appliance casing unless the appliance manufacturer states otherwise. Electronic fire valves are also available but should never be used on vaporising appliances due to the fact they will automatically reset after an interruption to the power supply. If the appliance is a vaporising cooker or an Oil lifter is fitted, an additional 1 or even 2 fire valves may also be required. When a remote sensing fire valve is installed there should be a separate and dedicated hole made through the wall which has been "sleeved" and sealed with silicone or mastic to prevent the capillary from coming into contact with the corrosive elements of masonry and mortar. The separate sleeve is to allow the fire valve to be replaced easily and without the need to cut and remove the actual oil line; which is not always possible.

Remote sensing fire valves are designed to shut off the supply of fuel in the event of a fire and dependant on the valve this could be when the ambient temperature around the sensor rises to between 65 and 95 degrees C. Although an essential safety control they can cause occasional "nuisance" problems:

If the pressure drops on a sealed system, or an open flued boiler suffers a down draft or back pressure, the ambient temperature will rise within the appliance casing and can shut off the fire valve. In sub-zero conditions fire valves may trip, or any condensation within them may freeze and block the fuel flow. Purpose built external boilers can also cause problems with fire valves as the internal ambient temperature can soar in hot weather or with direct sunlight, easily tripping a 95 Degree valve. 65 Degree Fire valves are usually used where the sensor is fitted in a room or near an appliance, whereas 95 Degree Fire valves are usually fitted when the sensor is located within the appliance casing.

There are two basic designs to a capillary fire valve, one with a plunger to pull to re-arm the fire valve, and the other with a button to push. The button can be made of brass, be a gun metal grey colour or made of black plastic. If when pulling the plunger, or pushing the button, it goes back to the previous failed position; then it is broken and will need replaced. In icy conditions you may need to thaw the fire valve and oil line with warm water before attempting to reactivate the fire valve.

Occasionally fire valves may have been jammed open to allow an appliance to be used; this usually happens in the winter when access to properties is difficult or if there is no stock available within a couple of days and the householder has no other forms of heat; this could be deemed a Potential Safety Risk. Although this practice is frowned upon, desperate situations sometimes lead to desperate actions. If this happens it should only ever be as a short term method, the boiler should also be used as little as possible and not left in operation if the house is unattended. A replacement fire valve should then be installed at the earliest possible opportunity.

It is the owner/householders responsibility to ensure their system is compliant and safe.