

CHOOSING A SAFE

Choosing the wrong type of safe could prove a very costly mistake, however choosing the right model for your needs should be easy as long as you understand the function and design features of the different types available. The following simple guide outlines the main options and should help you on the right road.

Safes offer a convenient and cost effective means of protecting the items stored inside. Stand alone units come in many different sizes and design but all basically fall into one of three main categories:

- Data safes
- Fire safes
- Burglary / cash safes

Other types of unit include:

- Vaults and strongrooms
- Specialist key safes

Safe manufacturers have their products tested and rated against a variety of international test standards. Each different model in the range will have to be tested separately and a good safe will therefore carry a fire protection rating, data protection rating or security rating (normally expressed as an overnight cash storage value) dependent on the type of safe.



The fire safe

A fire safe is basically designed to protect stored documents against fire damage and many offer only a minimal level of security (cash rating). A formal testing and rating system indicates the ability of a particular model to withstand fire at a certain temperature for a period of time without damage to its contents.

Some low cost fire safes currently on the market are in fact manufactured from foil wrapped fibre board coated in plastic which may offer some protection against a minor fire but only very limited security as they can be broken into easily with a screwdriver or chisel.

A fire safe is designed to maintain an internal temperature within the unit of less than 200 degrees C (the point at which documents ignite) for its certificated period. (Fire safes are typically certificated for 30, 60, 90, or 120 minutes)

WARNING – a Fire Safe is not suitable for use as a Data Safe

The data safe

A data safe is similar to a fire safe but to be effective must maintain a much lower internal temperature in the event of a fire and also protect contents against other hazards such as high humidity and electro-magnetic contamination.

Few data safes will enjoy a security (cash) rating although a formal testing and rating system indicates the ability of a particular model to withstand fire at a certain temperature for a period of time without damage to its contents.

As data media corrupts at relatively low temperatures, a data safe is designed to maintain an internal temperature within the unit of less than 52 degrees C for its certificated period. (Data safes are typically certificated for 30, 60 or 120 minutes).

The burglary / cash safe

A burglary safe is designed primarily to protect the contents against theft or unauthorised access and will generally offer little or no protection against the damage of contents by fire or other risk.

Smaller units are often designed to be concealed (e.g. wall or floorboard safes) or will be bolted down for security, whilst heavier, larger units are typically free standing. The level of security a safe offers is indicated by its insurance rating. Insurers assess each make and model independently and set a cash and valuables rating for it.

At the bottom end of the range, burglary safes are priced from under £200 (although many of these units carry no insurance rating). At the top end of the range a high security safe may be rated for up to £150,000 storage, will cost many thousands of pounds and will require specialist delivery and installation.

Safe doors normally house the locking mechanism(s) and incorporate at least four point locking via robust internal bolts. Various locking mechanisms are available including mechanical key locking (standard option), conventional rotary combination

locks and on more recent models, an electronic keypad based code lock. More expensive safes often incorporate dual locking mechanisms for added security (e.g. mechanical lock and keypad).

Strongroom / vault

A free standing safe even of the highest security rating will not be suitable for storing large amounts of cash or valuables (£150,000 would typically be the maximum insurance rating for a grade 6 top rated safe). For a higher level of protection therefore, a purpose built vault or strongroom may be required.

One problem with purpose built vaults or strongrooms however is that they are static and can prove problematic if the site is ever scheduled for redevelopment or the business relocates. Although a specialist undertaking, a 'demountable strongroom' can if required be dismantled and reconstructed elsewhere should the need arise.

Buying new or second user?

Larger / higher value safes and demountable strongrooms are often available as second user units, allowing buyers to save themselves £££s against the cost of a comparable model

new unit. A professionally and properly refurbished second user safe, will have been thoroughly overhauled, with locks, seals, etc replaced as required, however it is important to source a second user unit through a reliable supplier.

Specialist key safes

The secure storage of keys is an essential part of the basic security precautions of any organisation, but is sadly often afforded a low priority. Keys can be stored in a conventional safe or in a purpose designed key safe or key organiser. Key cabinets offer a predefined location for each key and allow instant visual identification of the fact that a key is missing or in use. Key cabinets are lockable but generally should not be considered as high security storage (where a higher level of security is required a 'key safe' should be chosen). Well designed units will have adjustable key racks to allow users to customise the cabinet to store keys of different types and size easily and tidily.



Fire tests

In the event of an external fire, data safes and fire safes are required to maintain an internal environment that will ensure that the contents of the safe are neither destroyed or corrupted.

In the case of a document (fire) safe, this means that for a specified period (typically 30, 60, 90 or 120 minutes), the internal temperature must remain at less than 200 degrees centigrade, the point at which documents will combust.

In the data safe however, the temperature must be held at less than 52 degrees centigrade the point at which data media corrupts. A data safe must also offer protection against humidity levels over 85% and magnetic contamination.

A number of test standards are available for safe manufacturers to test their products against. Achieving the standards set out in any of the tests is a comfort to any would be purchaser, however as indicated in the overview chart below, some tests

are more rigorous than others and the VDMA DIS test is generally considered the ultimate standard to be achieved.

Fire can strike anywhere and at any time and when it does it can be devastating. Statistically over 60% of companies that suffer a major fire, fail with 18 months.



Summary of Generally Quoted Fire Test Standards (for Document and Data Safes)

Test Standard	Basic Fire Test	Other Tests	Class	Temp max/rise	Humidity max
UL 72 (Underwriters Laboratories USA)	Fire Endurance	1 Explosion Hazard 30 mins @ 1093 deg C. Furnace cool. 2. Fire & Impact, heat for 30,45 or 60 mins. Drop 9.14m, invert & reheat for 30, 45 or 60 mins. Furnace cool	350 150 125	177deg C 66deg C 52deg C	- 85% 80%
VDMA 24991 (Germany)	Fire Resistance Test	Fire Shock & Drop, heat for 30,45 mins. at 1090 deg C. Drop 9.14m, reheat for 30, 45 mins. Furnace cool, max temperature measured	P D DIS	150deg C 50deg C 30deg C	- 85% 80%
Nordtest NT Fire 017 (Sweden)	30, 60, 90 or 120 mins (+water cooling)	Optional 4m drop carried out after heating period and before water cooling No Soak Out Period	Paper Data	150deg C rise 50deg C rise N.B. temperatures measured at less sensitive positions than UL or VDMA	
JIS S1037 (Japan)	60, 120 or 180 mins (+water cooling)	1. rapid heating, 30 mins @ 900 deg C 2. optional drop, heat for 30, 45 or 60 mins. Drop 4m, air cool for 30 mins	Paper Data	180deg C rise 65deg C rise N.B. temperatures measured at less sensitive positions than UL or VDMA	

our thanks to Chubb Safes for providing the above summary of test standards