



THE
SAFETY SHOWER
PEOPLE

INDUSTRY FOCUS

CHEMICAL INDUSTRY



01273 400092
www.safetyshowerpeople.co.uk

Ensuring safety shower equipment is fit for purpose and will protect workers and companies (from potential litigation in the event staff are injured) is key. It requires understanding the sometimes not-very-clear regulations and obligations companies must meet and navigating the numerous product options available on the market today to find exactly the right solution.

Nowhere is having the right safety equipment more important than in the chemical processing sector where staff can be exposed to the most hazardous of materials. There are a whole host of challenges that Health & Safety officers need to take into consideration, not least of all navigating regulatory guidelines which can be unclear given safety shower equipment is not mandated by law. Other challenges can include corrosive environments, ensuring access to equipment and avoiding explosion risk. We look at how companies can best mitigate risks and protect their staff and themselves.

► CHALLENGES



● **Clarifying regulations**

While there is a wealth of health and safety legislation covering working with chemicals / in hazardous environments, there is no overall EU or UK standard that covers the design and installation of ALL types of shower and eye baths. Plumbed in eye showers are covered (under EN1514-2) and EN 15154-3 and EN 15154-4 cover non-plumbed body and eye showers respectively but there is no recognised EU standard for plumbed-in body showers. The lack of a standard does not, of course, mean that any design of shower will meet health and safety legislation; there is still a legal requirement to provide sufficient first aid equipment.

Solution

It is sensible to follow the standards used elsewhere, in particular the German DIN 12899-3 standard and the American ANSI Z358/1-2004/2009 standard. These both give details on minimum flow rates, shower spray patterns and other design features. The ANSI standards also give some guidance on meeting the obligations to ensure showers are accessible, visible and not impeded by environmental factors such as frost or heat. Further guidance is given on the quality and temperature of the water used in such showers. SSP can advise on all aspects of the standards.

● **Explosive environments - ATEX**

Many showers have warning lights, sirens, heating elements and other electrical equipment. These electrical components may be a vital part of the safety shower working effectively within a given safety strategy, for example, position lights may be vital to ensure a shower is able to be found in environments where visibility is restricted. The presence of electrical components in a potentially explosive environment, however, poses significant issues. If deployed in ATEX zones then these showers need to be certified for that zone.

Solution

Most of the electrical components found on our showers, from heating elements to warning lights and junction boxes, have ATEX certified options and the SSP range is only one of a handful in the world that has ATEX certification for the whole assembly. We can advise on all aspects of ATEX certification.





WHY CHOOSE SSP FOR YOUR SAFETY EQUIPMENT?

- Highest quality range on the market
- The ability to solve unique and complex challenges
- ISO 9001:2015 Certified
- Consistent quality assurance
- World-class customer support, service and advice



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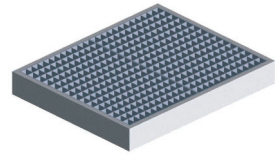
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● **Water run off - contamination and explosion risk**

Safety showers are designed to deliver a strong flow of water to the person using them. The whole purpose of the shower is to remove contaminants as quickly as possible. As such, the water from the shower will, in all likelihood, spray outside the designated shower as it hits the person being treated. Consideration should be given to any surrounding equipment that may be damaged by water. Likewise, the run off must be prevented from contaminating other parts of the site and from coming into contact with materials such as alkali metals that could cause an explosion

Solution

If sensitive equipment is located near the shower then panelled showers should be used to contain the spray. Showers can also be fitted with catchment trays and sumps to avoid potentially dangerous run-off.



● **Corrosive and harsh environments**

Chemical processing plants can be dealing with highly corrosive materials where copper, brass and plastic are not suitable or may be located in extreme temperatures. In hot environments, care needs to be taken that the water supplied to the shower does not overheat. In cold environments, a shower could potentially fail due to frozen water. In either case this could be construed as a failure on the company's part to provide sufficient safety equipment.

Solution

Fully stainless steel showers with stainless steel fittings will withstand harsh environments. They are also recyclable, unlike plastic showers. For hot environments, self draining showers are recommended whereas for very low temperatures, frost protected showers should be deployed with double trace heating and quality polyurethane insulation.



● **Accessibility**

General good practice is to have the equipment no more than 10 seconds walk away and on the same level as the hazard. If an injured worker has to climb or descend stairs or ladders then it would be difficult to argue that a reasonable provision of safety equipment has been met. Furthermore, access for wheelchair users should also be considered.

Solution

A thorough site audit should be taken and a range of different equipment should be used, from freestanding showers to mobile showers to tank showers which do not require a plumbed-in water supply so can be used in remote areas of the site. Bespoke options are also available if a particular flow rate or size of shower is required. All SSP showers are customisable with a range of accessories so a solution can be found to meet the characteristics of each individual location.



● **Keeping laboratory environments safe**

The very nature of lab work means that results can sometimes be unpredictable and whilst many other safety procedures and protective equipment will be used, the risk of contamination by corrosive materials and /or flammable materials may still be present. A suitable level of equipment needs to be found.

Solution

Where necessary, full-body showers come in range of options, including over door showers. In many cases, however, the quantity of hazardous fluids being used is sufficiently small to dispense with the need for full-body shower but in almost all situations where dangerous materials are being handled, eye showers will be required.



SSP can advise on all of the above aspects of your safety shower equipment needs. Please contact us on 01273 400092.