

General notes with regard to the installation of emergency safety showers

This document contains guidelines for a professional and safe installation of safety showers. These guidelines are based on the minimum performance standards as laid down in both the European norm EN15154 and the American ANSI norm Z358.1-2009. NOTE: National or local regulations may deviate from these norms, always check whether this is the case.

Distinction

Following types of safety showers can be distinguished; body showers (or drench showers), eye showers, face showers, drench hoses and combinations of these.

Guidelines for installation

The time that is needed to reach a safety shower is determined by the aggressiveness of the chemicals. Where really aggressive or caustic chemicals are used, the safety shower should be positioned within 3 metres from the spot. A safety shower should at least be attainable within 10 seconds or within a maximum of 30 metres walking distance. The showers should be easy to reach and not installed in an escape-route or above a door. Safety-showers need to be installed on a clearly visible place, easy to reach. Installation should be on the same level as the source of possible danger. A universal safety sign should be placed near the safety-shower.

The number of safety showers should be based on the number of possible victims at the same time.

The safety shower need to be connected directly to the water supply. The diameter of the pipe leading to the shower should have at least the same size as the diameter of the inlet of the shower. Take into account the possible simultaneous use of devices connected to the water supply.

"Dead" water lines should be avoided, to minimize the risk of bacterial growth (such as legionella).

Minimal pressure should be 2 bar. Maximum pressure 4,5 bar.

Minimum capacity: For body showers 80 l/min, eye showers 6 l/min, eye/face showers 12 l/min. Please check local requirements for exact figures. The flow rate should be checked after installation and during maintenance.

Eye showers are producing 2 soft water jets, directed inwards to each other, the height to be approximately 25 centimetre. Important is that the water jets do not harm the eyes.

Position body showers about 2,2 metre above the floor (not above an entrance).

The recommended height for eye-showers is approximately 1 metre.

Recommended water temperature is tepid, around 30°C.

If the safety showers are to be installed outside, make sure they are protected against frost.

Operation

- Manual operation by means of a chain, pull rod or handle.
- Floor operation by means of a treadle or grating.

The shower should run immediately after activation, and has to stay open until it is turned-off.

All employees need to be informed where the safety showers are located, how they are to be used and the corresponding safety instructions.

Maintenance: Safety showers need to be inspected and tested regularly (ANSI norm: weekly). Avoid growth of bacteria or fur in the shower.

In case of emergency

- rinse immediately with water, as long as possible
- call for a doctor or an ambulance
- inform the doctor about the substance that caused the injuries

Additional Remarks

15 minutes of flushing is recommended.

Installation of an alarm device is recommended if only one person is working in the hazardous area.

Drench hoses with only one spray head cannot replace eye-showers, while both eyes are often harmed during an accident.

Both hands have to be free to keep the eyes open during flushing.

Eyewash bottles are only to be used as a complementary device, not as a replacement.

Sources:

EN 15154

ANSI Z.358-1

Voorstudie ST-11, TVVL

June 2014

This information is purely informative. Steendam lab furnishing supplies BV does not accept any responsibility for the contents of this document or any use that might be made of it.