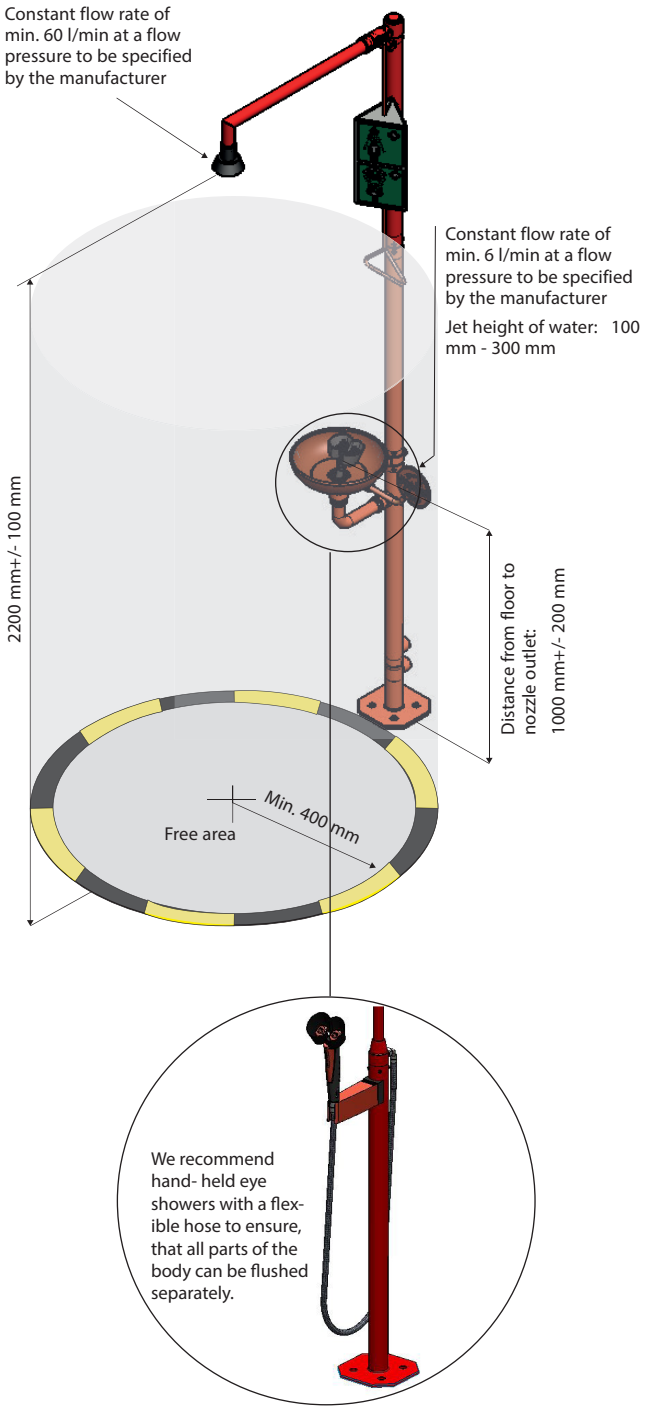
EN15154-5 - Body showers for sites other than laboratories

(This is BROEN-LAB's description of how to be in compliance with EN15154-5)

This standard includes, among others, areas with production and logistic sites. When it comes to performance, availability and testing of emergency showers the requirements have been sharpened in comparison to previous standards.

FREE AREA



INSTALLATION AND PLACEMENT

The emergency equipment should be installed within 10 sec, max. 20 m from the hazardous area without stairs or ramps or other obstacles.

The shower should be located in a clearly visible and easily identifiable place and be without en-route hin-drances like doors, partitions or similar.

The emergency equipment must be clearly marked with a safety sign that complies with ISO 3864.1.

The free area below the shower shall be at least Ø800 mm (but an eye shower can be placed in the area, but can't ingress by more than 200 mm). See illustration.

The shower head shall be installed 2200 ± 100 mm from the floor to the lowest point of the shower head,

The shower head shall be self-draining between valve and drain and supply a water flow rate in accordance with the classes below for at least 15 minutes.

Body Showers shall comply with one of the three below classes. The overhead volume flowrate defines the body shower classification.

Class	Volume flow rate L/min
I	30 to 60
II	>60 to 100
III	>100

**National risk assessment guidlines can be applied to determine the class of the body shower to be used.*

WATER TEMPERATURE AND WATER QUALITY

The temperature should be regulated to minimize the risk of hypothermia and also curb the proliferation of bacteria like Legionella. The water, supplied by the emergency shower, must be tepid - between 15-37 C° (ideally between 20-25 C°).

The water in the shower shall be of potable or similar quality, and must not be contaminated by the materials that the shower is constructed by.

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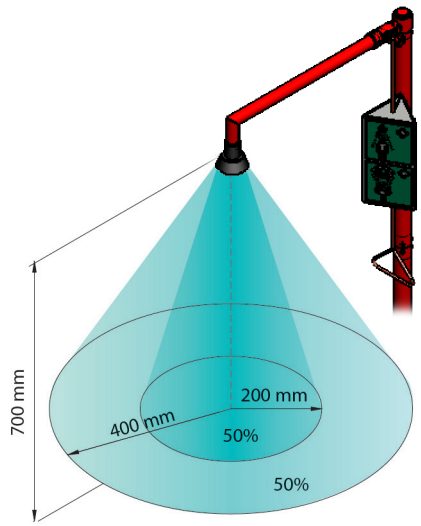
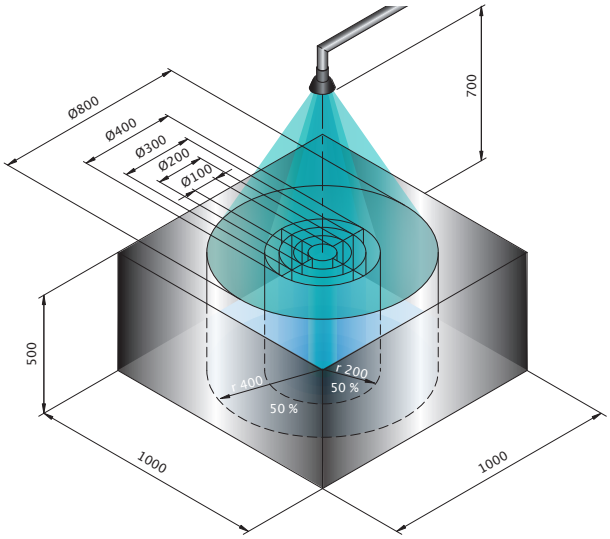
(Content and wording in this paper is based on being in compliance with EN15154-5)

The emergency shower should be tested at least once every month. The test must contain a visual inspection of water quality and spray pattern and a measuring of flow rate.
The test of the emergency shower system must be documented.

SPRAY PATTERN



TEST OF WATER DISTRIBUTION



WATER PRESSURE AND FLOW RATE

Overhead body showers

The flow rate shall be in accordance with class 1-3. This should be mea-sured, where the shower is connected to the water supply.

Combination showers with hand-held showers:
Water volume flow rate must be maintained in both body and eye shower - also if activated simultaneously.

A hand-held shower with a flexible hose makes it possible to angle the shower in order to flush all parts of the body separately. The flowrate must be at least min. 10 l/min.

SPRAY PATTERN AND WATER DISTRIBUTION

The emergency shower shall deliver a constant water flow for at least 15 min, with the manufactuer-specified pressure.

Water distribution shall be measured 700 mm below the shower head.

50 ± 10 % of the water of the volume must fall in a circle with a radius of 200 mm. In the 13 compartments on the drawing, the water level must not deviate with more than 30 % from the mean value.

95 % of the water shall fall within a radius of 400 mm.

OPERATION

The opening valve shall be easy to operate and be fully opened in 1 sec. To open the valve a force of max. 100 N (10 kg) or a torque of max. 7 Nm is allowed. The valve shall not automatically close.

The emergency shower must reach full flow within 3 sec after activating.

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