

# Emergency Safety Showers

## EN 15154 - 1 & 2

Part 1: Plumbed-in Body Showers for Laboratories

Part 2: Plumbed-in Eye Wash Units

### Norm Reference:

**6. VALVE:** Operation by turning or moving a valve actuator to a maximum of 90° or a maximum of 200 mm stroke. The maximum force for the operation shall be 100 N or the maximum torque 7 Nm. Fully open within 1 second. Shall not close automatically.

**7. SHOWER HEAD:** Adjustments to the direction of spray or water distribution of a shower head shall only be possible with a tool. The shower head shall be self-draining between the valve and the outlet. The shower head shall be removable for maintenance, but only with the use of a tool.

**5.1. INSTALLATION HEIGHT:** The shower head shall be designed to be installed so that its lower edge is  $(2200 \pm 100)$  mm above the level on which the user stands.

**9. MARKING:** Safety sign in accordance with ISO 3864-1 shall be clearly visible and unmistakable.

**6. VALVE ACTUATOR:** Shall be clearly visible and unmistakable, located between floor level and a maximum of 1750 mm above that level.

**9. MARKING:** The shower shall be clearly and permanently marked showing requirements for minimum and maximum flow pressure and the maximum static pressure. Marking shall be performed by the manufacturer and shall show the name of the manufacturer and the model/article number.

**Model: Body and Eye Shower**  
**Article no.: 17 656.009**  
Min. flow pressure: 1.5 bar (22 psi)  
Max. flow pressure: 5 bar (72.5 psi)  
Max. static pressure: 10 bar (145 psi)

**8. MANUFACTURER'S INFORMATION:** With the emergency body shower, the manufacturer shall supply information on installation, operation, and maintenance, as well as the method and frequency of routine testing.

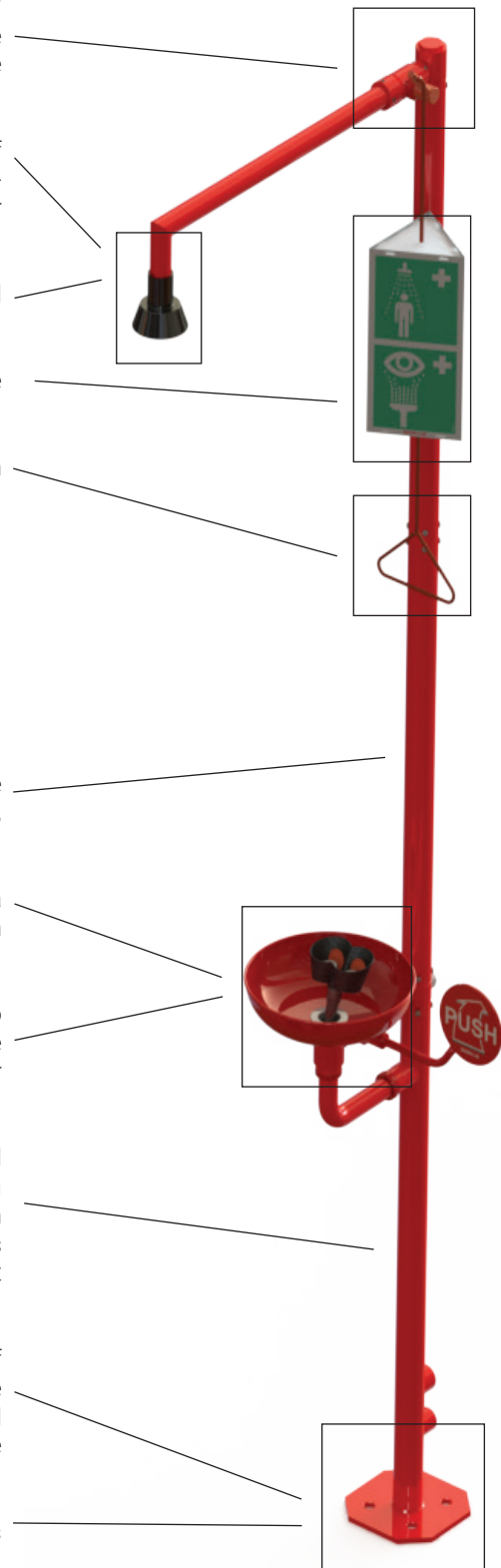
**4.2. JET HEIGHT:** The jet of water supplied by the nozzle(s) shall spray at a minimum height of 100 mm and may spray at a maximum height of 300 mm both measured from the nozzle centre, before tipping over or collapsing.

**4.1. FLOW RATE OF WATER:** Plumbed-in eye wash units shall be designed to deliver a constant flow rate of at least 6 l/min at a flow pressure specified by the manufacturer. The eye wash units shall be capable of maintaining this supply for a minimum of 15 minutes.

**5.2. FREE SPACE:** The free space between the centre line of the shower head and the nearest obstruction (wall, vertical supply tube, or similar) shall be a circle with a minimum radius of 400 mm. Only the valve control element and/or the eye wash station and/or the hand-held shower at a combined shower shall project into this space by a maximum of 200 mm. Other parts or components shall not project into this space.

**4.1. FLOW RATE OF WATER:** The water supplied by the body shower shall be of a constant flow rate in accordance with national regulations at a flow pressure specified by the manufacturer. The flow pressure shall be specified and measured where the shower is connected to the water system. The body shower shall be capable of maintaining this supply for a minimum of 15 minutes.

**3.2. PLUMBED-IN BODY SHOWER:** Permanently connected to a continuous water supply.



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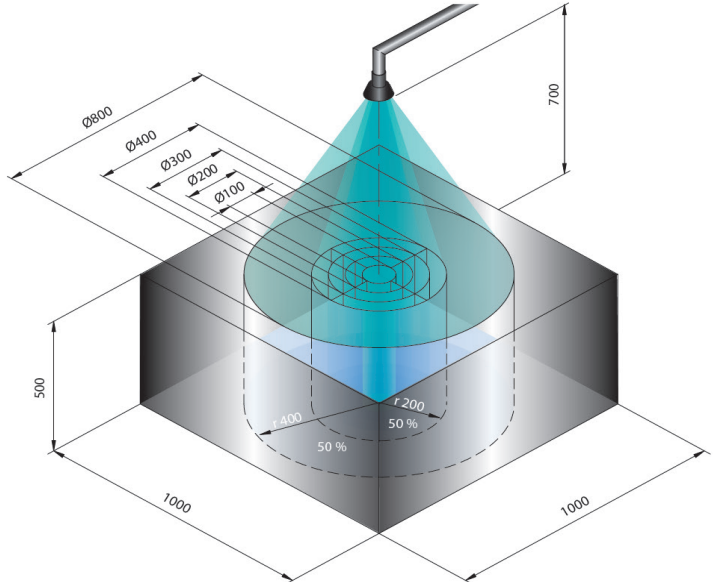
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**4.2 WATER DISTRIBUTION:** The water distribution of the emergency body shower shall be measured by the following type test procedure. As shown in Figure 1, at a distance of 700 mm below the showerhead,  $(50 \pm 10)\%$  of the volume of water delivered shall fall within a circle with a radius of 200 mm; the water level in the individual compartments within this circle shall not deviate by more than 30% from the average value.

At this measuring level, the area reached by a minimum of 95% of the water shall be limited to a circle with a radius of 400 mm. The velocity of the water spray shall be low enough to be non-injurious to the user.



**4.1. FLOW RATE OF WATER:** When no national or local regulations apply, a constant flow rate of at least 60 l/min is suitable.

**4.3 WATER QUALITY:** Potable water or water of a similar quality complying with European or national standards is required for body showers. Materials used in the construction of the shower shall not affect the water quality or contaminate the water supply.

**9 MARKING:** In addition, a safety sign in accordance with ISO 3864-1, displayable near the shower, shall be supplied with each emergency body shower.



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