

EMERGENCY WALL MOUNTED HAND OPERATED DELUGE SHOWER

Installation, Operating & Maintenance Instructions

EW1050



I00232_Mar 2016

NOTE: THIS DOCUMENT IS TO BE LEFT ONSITE WITH FACILITY MANAGER AFTER INSTALLATION

Call 1300 369 273

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The logo for ENWARE, featuring three stylized blue waves to the left of the word "ENWARE" in a bold, blue, sans-serif font.

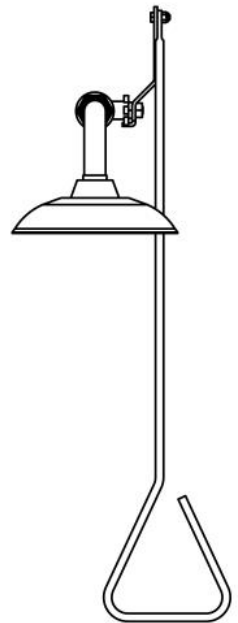
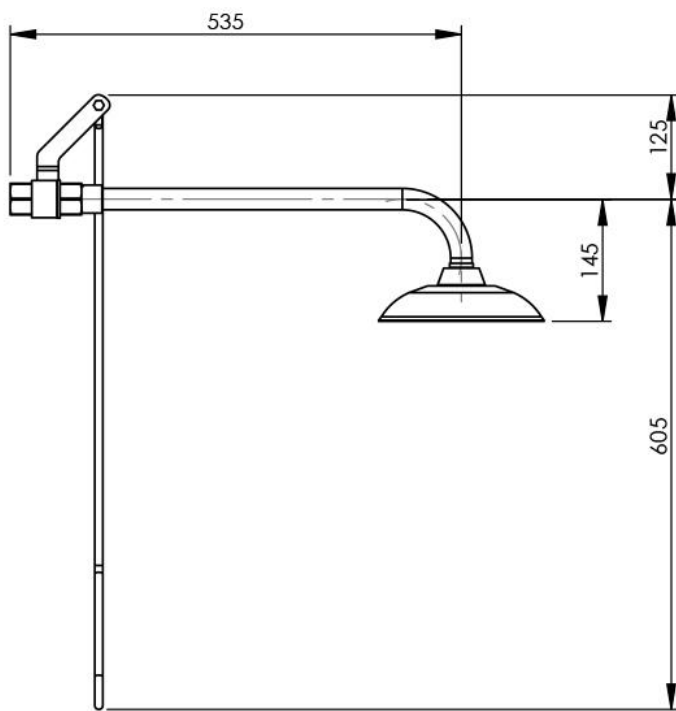
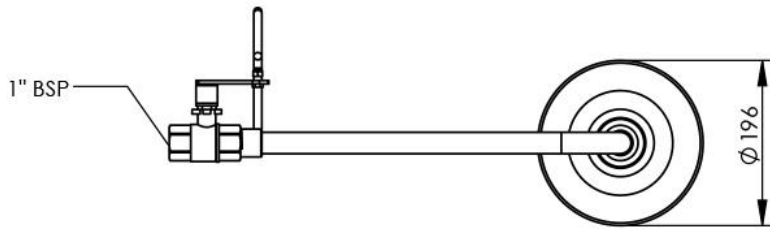
installing**confidence**

TECHNICAL INFORMATION

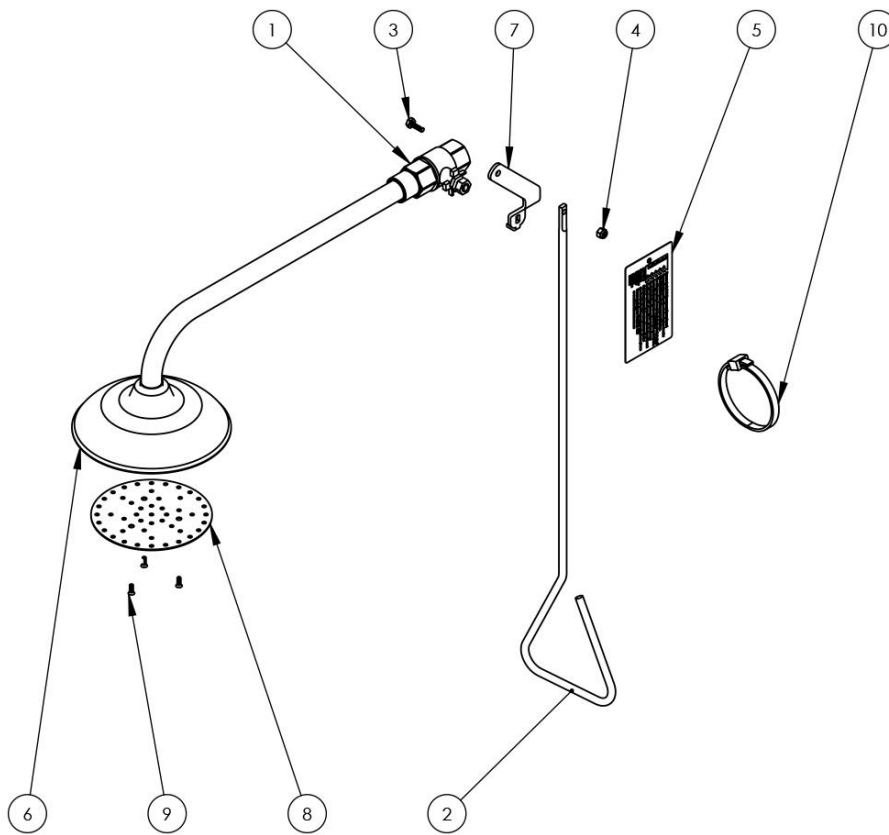
Inlet Connection	1" BSP (DN25mm)
Shower	Operate by pulling down on activation handle
Minimum Water Supply Line Size	DN25mm (1") Nominal Size
Minimum Requirements to achieve ANSI Z358.1-2009 and AS4775-2007 compliance:	
Min Working Pressure	210 kPa (30 psi) Caution should be taken when pressure exceeds 550 kPa (80 psi)
Shower Minimum Flow	75.7 lpm (20 US gpm)
Minimum performance values for low pressure installations and applications not requiring compliance to Australian Standard	Min Working Pressure: 40 kPa (5.7 psi) [Safety showers are flow volume dependent and the line size needs to be hydraulically calculated.]
Shower Outlet Height	Min 2085mm – Max 2180mm from floor (For installations at greater heights, a longer activation handle is required to comply with ANSI Z358.1 or AS4775. Contact Enware for more detail.)
Shipping	Weight: 3 kg Dimensions: 820 x 220 x 210mm

For use with potable water only.

DIMENSIONS



COMPONENTS



Part	Description
1	Ball Valve 1"
2	Pull Handle (Yellow)
3	Handle Fixing Screw
4	Nut
5	Safety Inspection Tag
6	Shower Rose and Arm
7	Ball Valve Handle
8	Shower Outlet Disc
9	Screw
10	Cable Tie for Inspection Tag

INSTALLATION COMPLIANCE

Installation of eyewash equipment shall be in accordance with AS4775-2007 or ANSI Z358.1-2009 - whichever is applicable to the installation.

SUPPLY LINES

Installation procedures shall be in accordance with correct plumbing practices. Supply piping shall be adequately sized to meet flow requirements. If shut off valves are installed for maintenance purposes, provisions shall be made to prevent unauthorised shut off.

PLACEMENT OF EMERGENCY EQUIPMENT

Emergency eyewash and shower equipment shall be available for immediate use. It shall take no longer than 10 seconds for an individual to reach the nearest facility. Factors that influence the location of emergency facilities include workplace lighting, obstructions to the path of travel and the work environment.

It should be noted that some situations may warrant the placement of equipment significantly closer to the hazard. In these situations, such as exposure to highly corrosive chemicals, the proper distances should be selected based on the advice from appropriate consultants. For situations such as exposure to strong acids or alkalis, due consideration needs to be given to possible reaction between the flushing fluid and the chemical if the flushing fluid enters a bulk container of the chemical.

FLUSHING FLUID TEMPERATURE

Continuous and timely irrigation of affected tissues for the recommended irrigation period are the principal factors in providing first aid treatment. Providing flushing fluid at temperatures conducive to use for the recommended irrigation period is considered as an integral part of providing suitable facilities. Medical recommendations suggest a flushing fluid at tepid temperature be delivered to affected chemically-injured tissue.

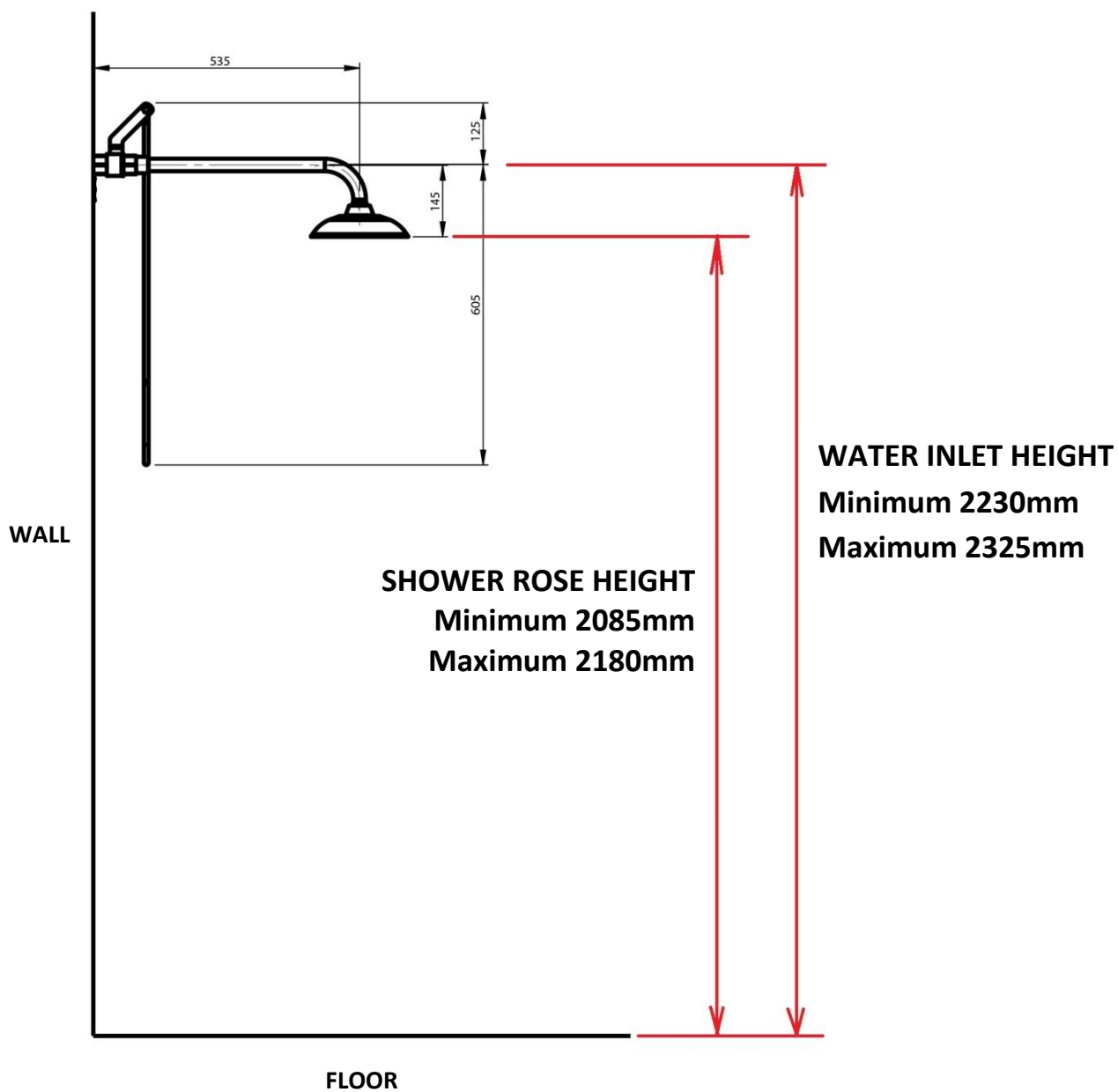
Temperatures in excess of 38°C have proven to be harmful to the eyes and can enhance chemical interaction with the eyes and skin. During design and installation, the effects of exposure of pipe to sun, radiant heat or other heat sources should be considered, and suitable control measures should be introduced to avoid any risk of scalding. While cold flushing fluid temperature provide immediate cooling after chemical contact, prolonged exposure to cold fluids affects the ability to maintain adequate body temperature and can result in the premature cessation of first aid treatment.

Before emergency eyewash and shower equipment is selected, a risk assessment shall be carried out to determine the most appropriate delivery temperature for the application. Means to ensure a constant, suitable delivery temperature shall also be identified during selection, so that equipment can perform as desired once installed.

INSTALLATION PROCEDURE

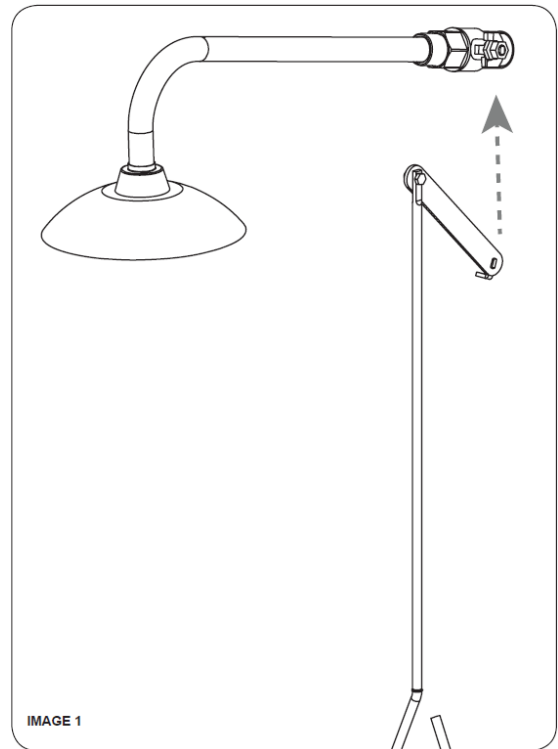
SHOWER HEIGHT

1. Note the minimum height requirement for the shower outlet to conform to AS4775-2007 and ANSI Z358.1-2009, of 2083mm from the floor. Maximum height for the activation handle is 1733mm, which limits the maximum height for the shower rose to 2180mm. If the shower needs to be installed higher, a longer activation handle is required. (Contact Enware for more information.)



INSTALLATION

2. Apply sealing tape or Loctite 577 to threaded inlet connection on wall. Screw on shower arm and tighten to an aligned position where the shower head is parallel to the floor. Use the hex on the ball valve, do not use the shower rose to tighten the thread.
3. Attach the pull arm to the Upper Ball Valve using the nut already on the ball valve. The valve arm should point up at 45 degrees when in the off position.



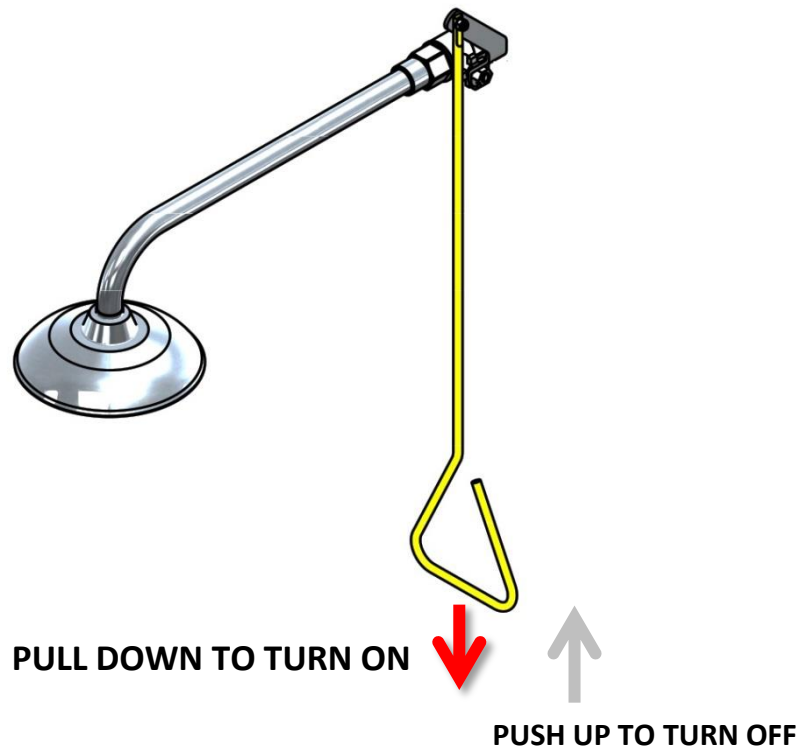
OPERATING AND TRAINING INSTRUCTIONS

Instructions for all emergency equipment shall be readily accessible to maintenance and training personnel. Employees who may be exposed to hazardous materials shall be instructed in the location and proper use of emergency shower equipment. Refer to AS4775-2007 or ANSI Z358.1 where applicable.

SHOWER OPERATION

Pulling down on the triangular pull handle activates the shower; this handle opens the 1" ball valve allowing water to flow through to showerhead.

To close the shower valve and stop flow, push the handle upwards.



MAINTENANCE

The shower should be activated every week for a period long enough to verify operation and ensure the flushing fluid is available. Note: the intent is to ensure that there is a flushing fluid supply at the head of the device and to clear the supply line of any sediment build up that could prevent fluid from being delivered to the head of the device, and to minimise microbial contamination due to sitting water.

All shower units shall be inspected annually by a qualified technician to assure conformance with ANSI Z358.1-2009 or AS4775-2007, whichever is applicable to the installation.

AS4775 – 2007 Safety Equipment Minimum Performance Checklist

- Installation shall be in accordance with proper plumbing practices. Supply piping shall be adequately sized to meet flow requirements. (Sec D1)
- All plumbed emergency equipment shall be connected to a continuous source of flushing fluid supply which may be drinking water, preserved water, preserved buffered saline solution or other medically acceptable solution manufactured and labelled in accordance with applicable government regulations. (Sec 4.4, 4.10, 6.7 (c)), 7.5 (b), 8.5 (b), 9.5 (b), 11.3.3 (c))
- All equipment shall be constructed of corrosion-resistant materials (Sec 4.2, 5.1) Note: The Plumbing Code of Australia does not allow the use of galvanised pipes or fittings on drinking water supply lines. AS/NZS3500.1 Sec 2.4.2(c)
- Safety equipment shall be accessible within 10 seconds of hazard. (Sec 6.6, 7.4, 8.4, 9.4)
- Safety equipment shall be located on the same level as the hazard and the path of travel shall be free of obstructions. (Sec 6.6, 7.4, 8.4, 9.4)
- Emergency equipment location shall be well illuminated and be identified by a highly visible sign complying with AS1319 visible throughout the area served by the equipment. (Sec 6.6, 7.4, 8.4, 9.4)
- Employees who may be exposed to hazardous materials shall be trained in the location and proper use of emergency equipment. (6.8, 7.6, 8.6, 9.6).
- Emergency equipment shall be activated weekly to verify operation (6.8, 7.6, 8.6, 9.6)
- Emergency equipment shall be inspected annually to ensure conformance with the requirements of AS4775. (Sec 6.8, 7.6, 8.6, 9.6)
- Combination unit components shall comply with the individual performance requirements of the shower, eye wash & eye/face wash while operating simultaneously & shall be positioned so components may be used simultaneously by the same user. (Sec 9.3, 9.5 (b), 9.5 (e) (iii))
- Drench hoses are considered supplemental equipment to provide immediate flushing to support plumbed and self-contained equipment but shall not replace them. (Sec 11.1)
- Drench hoses shall be simple to operate and shall go from closed to fully open in one second or less. The valve shall be corrosion resistant. (Sec 11.3.2)
- Showerhead shall be not less than 2083mm and not more than 2438mm from the surface on which the user stands. (Sec 6.5.1, 9.1 (b))
- Shower shall deliver a minimum of 75.7 l/min of flushing fluid at 210kPa, with the flushing fluid being substantially dispersed throughout the pattern which shall be of a minimum diameter of 508mm when measured at 1524mm above the surface on which the user stands. (Sec 6.2, 6.5, 9.1 (b), 9.3)
- The shower operating control valve shall remain open without the use of the operator's hands. The valve shall be simple to operate and shall go from closed to fully open in one second or less and not be located more than 1733mm from the surface on which the user stands. The valve shall be corrosion resistant. (Sec 6.3, 7.2, 8.2, 9)
- Eye wash equipment shall deliver flushing fluid to both eyes simultaneously at a flow rate not less than 1.5 l/min at 210kPa. The flushing fluid streams should rise to approximately equal heights and should cover the areas between the interior and exterior lines of the test gauge and when lowered not more than 38mm below the fluids peak. (Sec 7.1, 9.1 (c), 7.3.1)
- Eye / face wash equipment shall deliver flushing fluid to the eyes simultaneously at a flow rate not less than 11.4 l/min at 210kPa. The flushing fluid streams should rise to approximately equal heights and should cover the areas between the interior and exterior lines of the test gauge when lowered not more than 38mm below the fluids peak. (Sec 8.1, 8.3, 9.1 (d))
- The flushing fluid nozzles of eye and eye/face wash units shall be not less than 838mm and no greater than 1143mm from the surface on which the user stands, and 153mm from the wall or nearest obstruction. (Sec 7.4, 8.4, 9.1 (c), 9.1 (d))
- The eye and eye/face wash operating control valve shall remain open without the use of the operator's hands. The valve shall be simple to operate and go from closed to fully open in one second or less. The valve shall be corrosion resistant. (Sec 7.2, 8.2, 9.1 (c), 9.1 (d))

ANSI Z358.1 – 2009 Safety Equipment Minimum Performance Checklist

RECOMMENDED TESTING FLOW PRESSURE IS 30 psi (+.5 psi -.0 psi)

- Safety equipment shall be accessible within 10 seconds of hazard. (Sec 4.5.2, 5.4.2, 6.4.2, 7.4.2)
- Safety equipment shall be located on the same level as the hazard and the path of travel shall be free of obstructions. (Sec 4.5.2, 5.4.2, 6.4.2, 7.4.2)
- All employees subject to exposure to hazardous material should be instructed in the location and proper use of emergency equipment. (Sec 4.6.4, 5.5.4, 6.5.4, 7.5.4)
- Emergency equipment shall be activated weekly. (Sec. 4.6.2, 5.5.2, 6.5.2, 7.5.2) All shower units shall be inspected annually to assure conformance with ANSI Z358.1. (Sec. 4.6.5, 5.5.5, 6.5.5, 7.5.5)
- Combination unit components shall be capable of operating simultaneously and shall be positioned so that components may be used simultaneously by the same user. (Sec. 7.3, 7.4.4)
- All plumbed emergency equipment shall be connected to a continuous source of flushing fluid supply which may be drinking water, preserved water, preserved buffered saline solution or other medically acceptable solution manufactured and labelled in accordance with applicable government regulations.
- Drench hose must deliver a controlled flow of flushing fluid at a velocity low enough to be non-injurious. (Sec. 8.2.1)
- A drench hose can only be considered an eyewash – eye/face wash if it meets performance requirements in Sec. 5 and/or 6.
- Delivery of tepid flushing fluid.* (Sec. 4.5.6, 5.4.6, 6.4.6, 7.4.5). ***Suggested temperature range – above 60°F (16°C) and below 100°F (38°C)**
- Showerhead must be 82 to 96 inches (208.3cm – 243.8cm) above surface floor of user (Sec. 4.1.3, 7.1)
- Shower must deliver minimum of 20 gallons (75.7L) per minute and provide a column of water 20 inches (50.5cm) wide at 60 inches (152.4cm)
- Valve shall be designed so that the flushing flow remains on without the use of the operator’s hands. The valve shall be simple to operate and go from “off” to “on” in one second or less and actuator can not be more than 69 inches (173.3cm) from surface floor of user. (Sec. 4.2, 7.1)
- Emergency equipment location shall be well lit and identified with a highly visible sign. (Sec. 4.5.3, 5.4.3, 6.4.3, 7.4.3)
- Must provide a means of controlled flow to both eyes simultaneously at a velocity low enough to be non-injurious. (Sec. 5.1.1, 6.1.1, 7.1)
- Eye/face wash equipment must deliver minimum of 3 gallons (11.4L) per minute of water for 15 minutes. (Sec. 6.1.6, 7.1) Eyewash only must deliver minimum of 0.4 gallon (1.5L) per minute for 15 minutes. (Sec. 5.1.6, 7.1)
- The flushing fluid of an eyewash – eye/face wash shall cover the areas between the interior and exterior lines of a gauge at some point less than 8 inches (20.3cm) above the eyewash nozzle. (Sec. 5.1.8, 6.1.8, 7.1)
- Outlets shall be protected from airborne contaminants. (Sec. 5.1.3, 6.1.3, 7.1)
- Flushing fluid nozzles should be 33 to 45 inches (83.8cm – 114.3cm) from floor and minimum of 6 inches (15.3cm) from wall. (Sec. 5.4.4, 6.4.4, 7.1)
- Valve shall be designed so that the flushing flow remains on without the use of the operator’s hands. The valve shall be simple to operate and go from “off” to “on” in one second or less. (Sec. 5.2, 6.2, 7.2)

NOTES



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