

EMERGENCY SHOWER, EYE & EYE/FACE WASH

Installation, Operating & Maintenance Instructions

ECE030












ECE060
ECE090
ECE240
ECE270



ENBE060
ENBE090
ENBE240
ENBE270



product descriptions

 <p>ECE030 EMERGENCY STAINLESS STEEL SHOWER</p>	 <p>ECE060 EMERGENCY STAINLESS STEEL COMBINATION SHOWER WITH HAND OPERATED EYEWASH</p>	 <p>ECE090 EMERGENCY STAINLESS STEEL COMBINATION SHOWER WITH HAND/ FOOT OPERATED EYEWASH</p>
 <p>ECE240 EMERGENCY STAINLESS STEEL COMBINATION SHOWER WITH HAND OPERATED EYE/FACE WASH</p>	 <p>ECE270 EMERGENCY STAINLESS STEEL SHOWER WITH HAND/FOOT OPERATED EYE/FACE WASH</p>	 <p>ENBE060 EMERGENCY STAINLESS STEEL COMBINATION SHOWER WITH HAND OPERATED NO-BOWL EYEWASH</p>
 <p>ENBE240 EMERGENCY EMERGENCY STAINLESS STEEL COMBINATION SHOWER WITH HAND OPERATED NO-BOWL EYE/FACE WASH</p>	 <p>ENBE270 EMERGENCY STAINLESS STEEL COMBINATION SHOWER WITH HAND/FOOT OPERATED NO-BOWL EYE/FACE WASH</p>	 <p>ENBE090 EMERGENCY STAINLESS STEEL COMBINATION SHOWER WITH HAND/ FOOT OPERATED NO-BOWL EYEWASH</p>

technical information

Inlet Connection	25mm (1" BSP)	
Water Supply Line Size	Supply piping shall be adequately sized to meet flow requirements	
Minimum Requirements to achieve ANSI Z358.1-2009 and AS/NZS 4775 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)
	Eye Wash Minimum Flow	1.5 lpm (0.4 US gpm)
	Eye/Face Wash Minimum Flow	11.4 lpm (3 US gpm)
Enware Performance	At Working Pressure: 210 kPa (30 psi)	
	Shower Flow	76 lpm (20 US gpm)
	Eye Wash Flow	17 lpm (4.5 US gpm)
	Eye/Face Wash Flow	26 lpm (6.9 US gpm)
Waste Water Outlet Size	38.1 mm (1½") OD	
Mounting Base Plate Size	150 x 150 mm (5 9/10 " x 5 9/10") with 4 bolts 11 mm (7/16")	
Shipping	Approximate Weight: 9.5 - 13.5 kilograms	
	Dimensions: 1150 x 287.5 x 200 mm	

installation compliance

Installation of emergency showers, eye and eye/face wash equipment shall be in accordance with AS/NZS4775-2007 or ANSI Standard Z358.1-2009 - whichever is applicable to the installation. REFER to checksheet on pages 10 and 11.

Supply Lines

Installation procedures shall be in accordance with proper 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

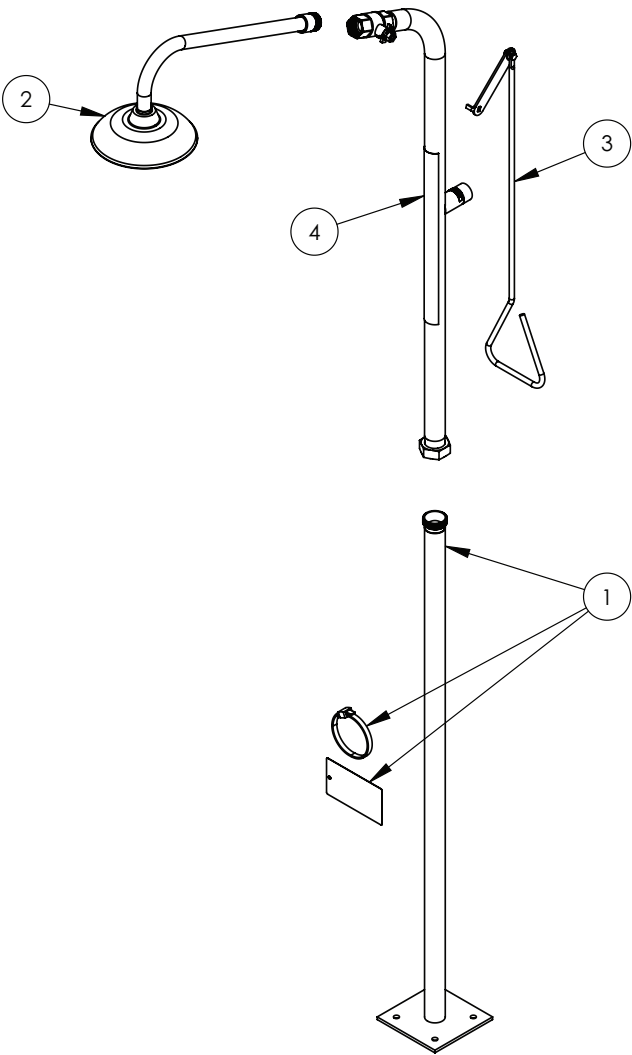
Emergency eyewash and shower equipment shall be available for immediate use. It shall take no longer than 10 seconds for an individual to reach the nearest facility. Factors that influence the location of emergency facilities include workplace lighting, obstructions to the path of travel and the work 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 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 constantly suitable delivery temperature shall also be identified during selection, so that equipment can perform as desired once installed.

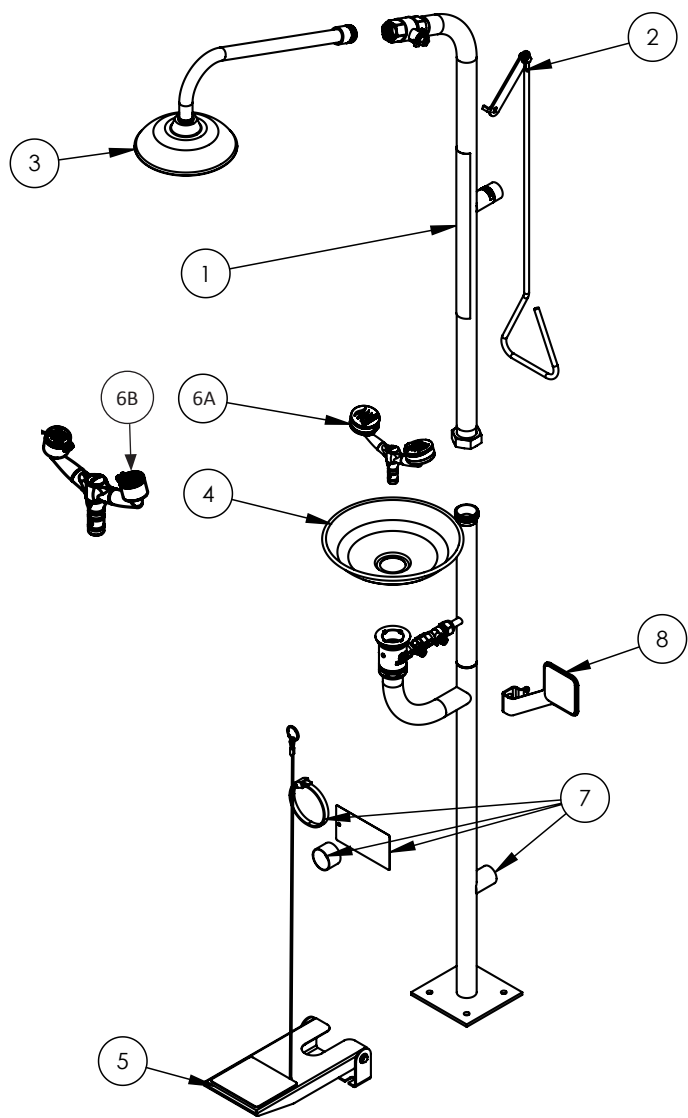
components

ECE030



#	Description
1	Base Frame Complete with Inspection Tag
2	Shower Arm & Rose
3	Pull Handle
4	Upper frame with ball valve

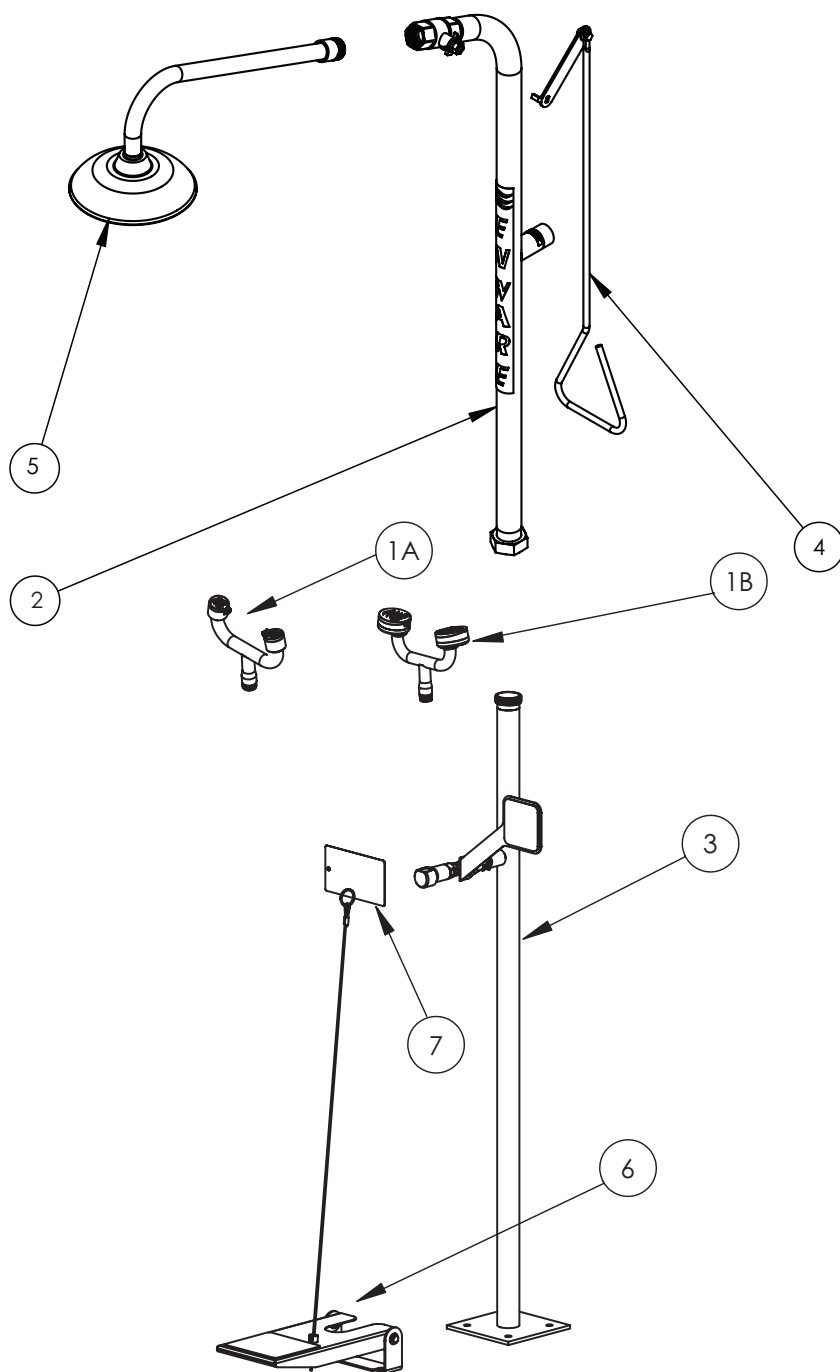
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#	Description
1	Upper Frame with Ball Valve
2	Pull Handle
3	Shower Arm and Rose
4	New Style Bowl - 304 SS
5	Foot Pedal with Cable*
6A	Eye Wash Outlet Assembly
6B	Eye/Face Wash Outlet Assembly
7	Base Frame with Eyewash Control & Waste
8	Inspection Tag

* ECE090 and ECE270 only

ENBE060 ENBE090 ENBE240 ENBE270



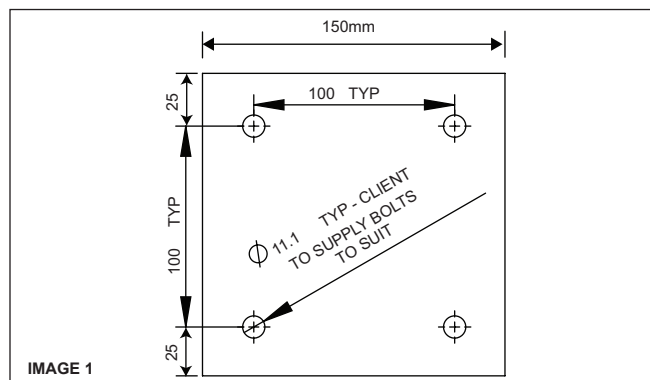
#	Description
1A	Eye Wash Outlet Assembly
1B	Eye/Face Wash Outlet Assembly
2	Upper Frame with Ball Valve
3	Base Frame with Eye Wash Control
4	Pull Handle
5	Shower Arm and Rose
6	Foot Pedal with Cable*
7	Inspection Tag

* ENBE090 and ENBE270 only

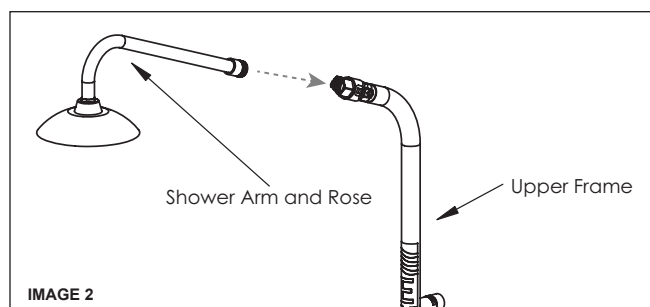
assembly/installation procedure

1. Place the unit so there is enough space for any additional plumbing fixtures being used (drain, taps, strainers, shut-off valves). Bolt base of Lower Shower Assembly to a level floor using 4 corrosion resistant anchors (see AS/NZS 2982.1, ANSI Z358.1-2009 and AS/NZS4775-2007).

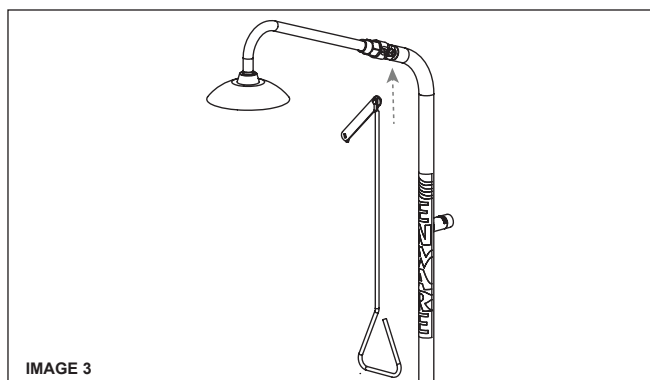
Base Plate is 150mm square with mounting holes at 100mm centres. SEE IMAGE 1.



2. Apply sealing tape or Loctite 577 to threaded end of shower rose assembly and screw it into the ball valve of the Upper Shower Assembly. SEE IMAGE 2. Tighten to an aligned position where the shower head is parallel to the floor.

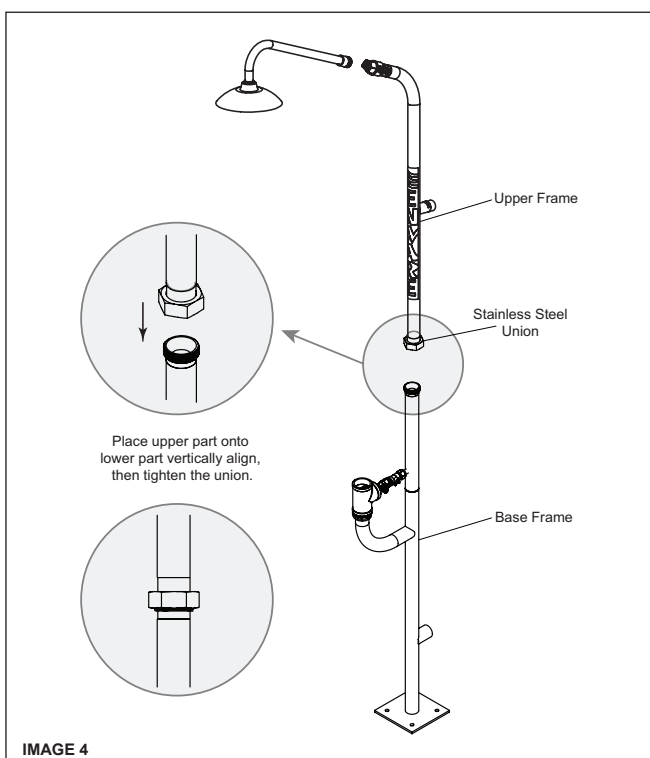


3. Attach the pull arm to the Upper Ball Valve using the nut already on the ball valve. SEE IMAGE 3. The valve arm should point up at 45 degrees when in the off position.



4. Connect Upper Shower Assembly to Lower Shower Assembly using the integral Stainless Steel Union. SEE IMAGE 4. No tools are required.

Be sure the rubber O-ring is in place on the tapered section of the union and tighten by hand. For combination showers, make sure the arm of the shower is centered over the Eye (Eye/Face) wash.



assembly/installation procedure

Eye (Eye/Face) Wash Installation Procedure

5. Attach the Eye or Eye/Face wash push handle to the Activation Ball Valve using the spring washer & hexagonal nut already on the ball valve. **SEE IMAGE 5.**

6. If a bowl is to be included with the Eye (Eye/Face) wash, place the Bowl on top of the Waste Adaptor. Using the Washer and the Waste – screw in to the Waste Adaptor to secure the bowl. Turn as tight as you can with fingers, then turn Waste and Bowl together using the outside edge of the bowl for extra leverage. **SEE IMAGE 6**

7. Remove the grub screw from the front of the waste adaptor.

Push the eye (eye/face) wash assembly into the centre of the waste adaptor making sure the directional arrow is facing the front.

Re-fit the grub screw and tighten until it locates within the eye wash frame.

8. Connect the water supply line to the 1" thread located on the Upper Shower Assembly. Use thread tape or Loctite 577 on all threads.

9. Connect the drain line (if applicable) for the Eye (Eye/Face) Wash Sink using the 1½" OD outlet located on the Lower Shower Assembly. There should be sufficient clearance for the addition of a drain trap if required.

10. (For Foot-Operated Models Only) Back off the two rear shower mounting bolts. Slide the bracket under the washers of the shower mounting bolts and retighten. Reattach foot pedal plate to bracket using bolts supplied. Do not over tighten. **SEE IMAGE 8**

Attach cable to push handle and set the cable length. To do this, turn the push handle to the full on position and lower the foot pedal to approximately 3mm from the ground. Loosen the locking nut using the 4mm Allen key, pull excess cable through and re-tighten nut. Return push handle to the off position. **SEE IMAGE 9**

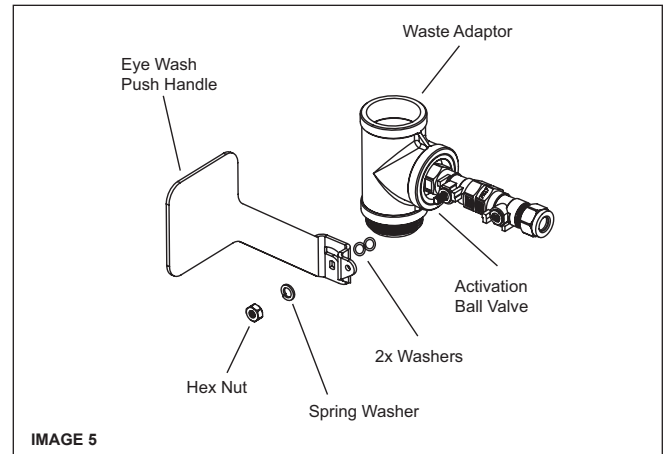


IMAGE 5

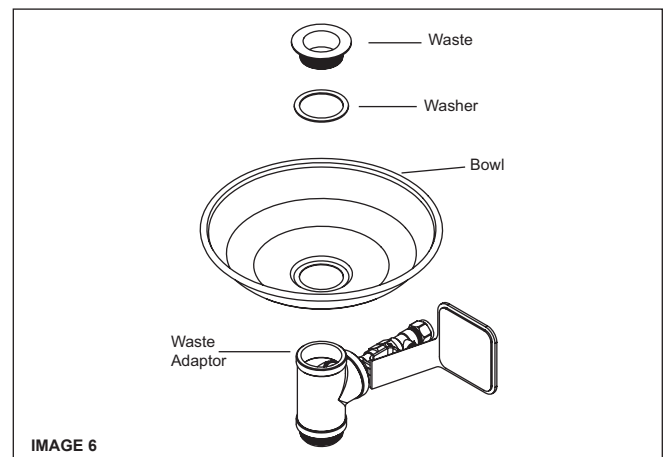


IMAGE 6

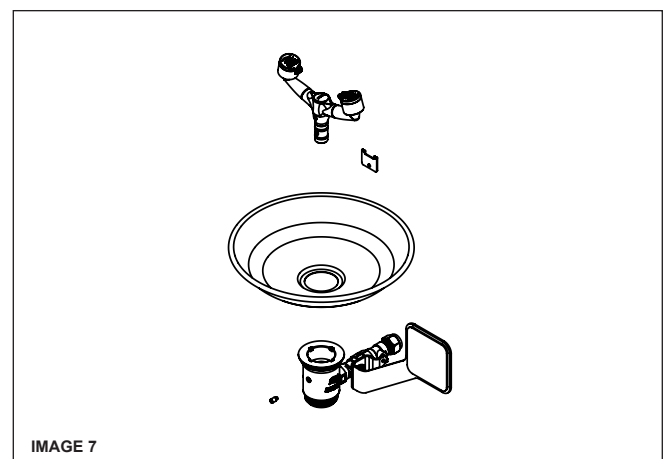


IMAGE 7

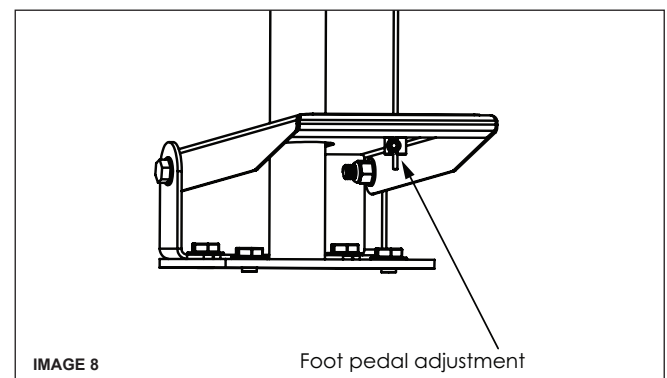


IMAGE 8

11. Before turning on the water supply to the unit make sure both the shower and Eye (Eye/Face) wash valves are closed.
Push up the shower pull rod so the valve arm is pointing back up and pull forward the Eye (Eye/Face) wash "PUSH" handle back up to ensure the valves are in the closed position.

12. Turn water supply on. Check for leaks before proceeding.

13. Slowly push the Eye (Eye/Face) wash valve handle forward to start the water flow.

Flush until the water runs clean then pull back on the push handle to stop flow. Replace aerator assemblies.

Remove internal strainer by unscrewing the strainer cap with a flat head screw driver.

Clean strainer and re fit.

14. Push the Eye (Eye/Face) Wash valve handle forward again to start the water flow. Use a slotted screwdriver to turn off the second ball valve located before Eye (Eye/Face) Wash activation ball valve.

SEE IMAGE 11. Turn the push handle to the full open position, and adjust the second ball valve with the screwdriver until the correct flow is achieved. The point of fluid stream interaction should be no more than 38mm above the position of user's eyes. **SEE IMAGE 10 and 11**

15. To activate the shower, pull down on the triangular pull rod. A large amount of water will flow from the showerhead on to the floor. The spray pattern should be 508mm in diameter at a height of 1524mm from the floor. **SEE IMAGE 12.**

The shower should also deliver at a minimum flow rate of 75.7 lpm.

16. Once correct operation has been checked, turn off the valves by positioning the handles to the fully off position.

Note: Water will drain through the 2mm hole near the shower head/ball valve connection. This is a self-draining feature designed to drain water remaining in shower head to reduce Legionella risk.

Place dust covers over Eye (Eye/Face) wash outlets. Mount appropriate Shower and Eye (Eye/Face) wash signage as required - refer to Enware's Product Guide or call Customer Service on 1300 369 279.

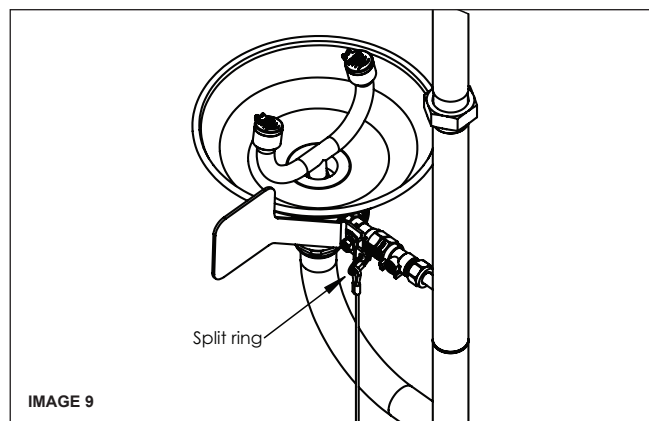


IMAGE 9

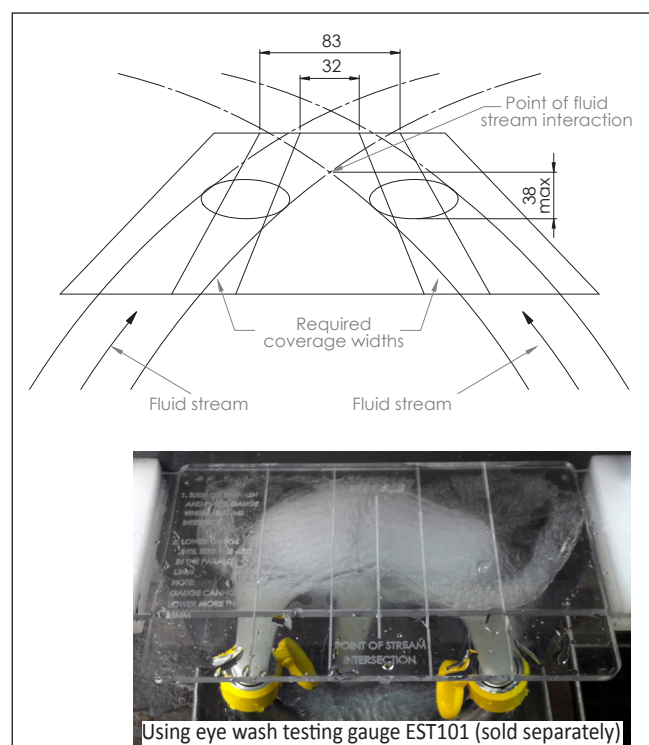


IMAGE 10

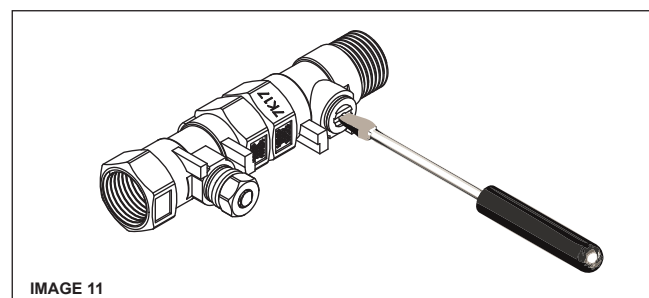


IMAGE 11

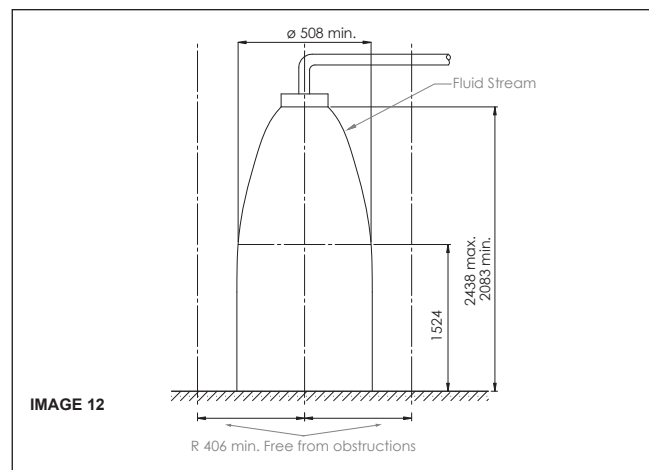


IMAGE 12

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 AS/NZS 4775 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 the handle is pushed upwards. The water remaining in shower head will drain through the self-draining hole after closing the valve.

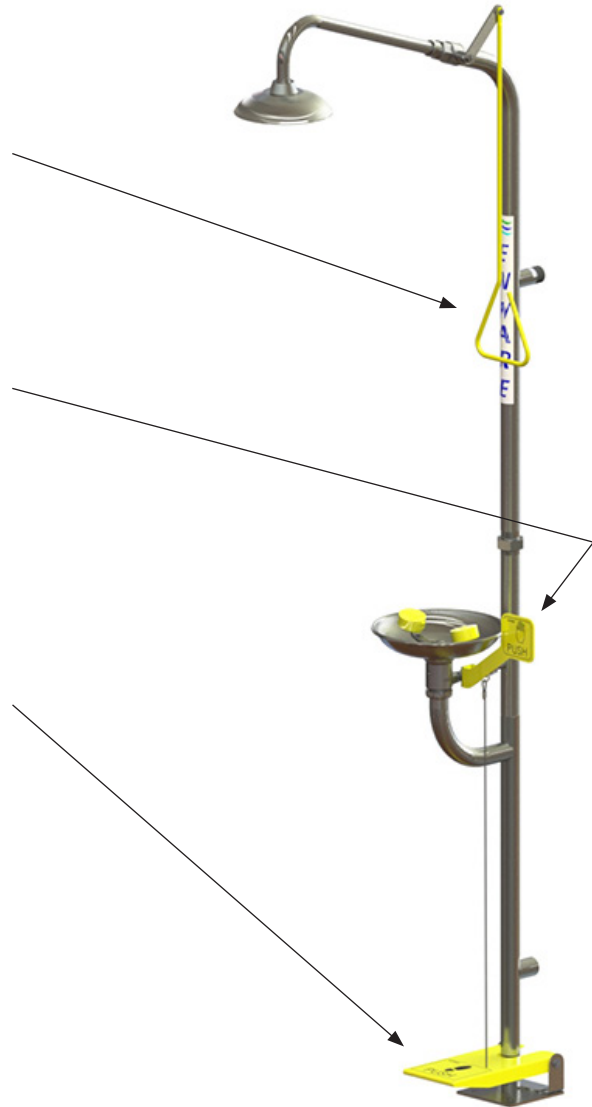
EYE, EYE/FACE WASH OPERATION

The Eye/Face wash is activated by pushing forward (away from the user) the flat "PUSH" handle. This opens the ½" ball valve allowing water to flow to the Eye, Eye/Face wash outlets. To close the valve and stop flow, gently pull the handle back up (towards the user).

FOOT PEDAL OPERATION

(ECE090, ENBE090, ECE270, ENBE270)

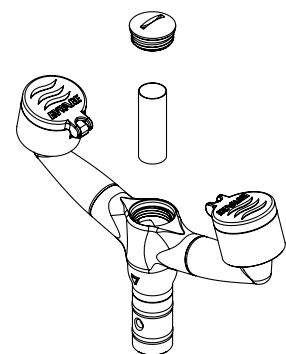
The Eye, Eye/Face wash can be activated by pushing down the foot pedal where marked. This opens the ½" ball valve allowing water to flow to the Eye, Eye/Face wash outlets. To close the valve and stop flow gently pull the "PUSH" handle back (towards the user). Releasing the foot pedal will not stop the flow.



maintenance

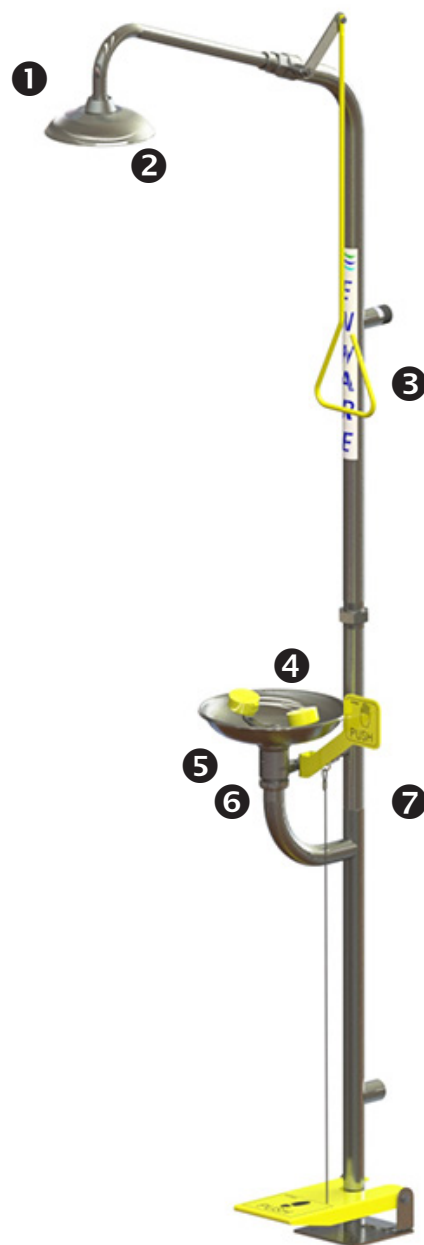
The unit should be activated every week for a period long enough to verify operation and ensure the flushing fluid is available. Note: the intent is to ensure that there is a flushing fluid supply at the head of the device and to clear the supply line of any sediment buildup that could prevent fluid from being delivered to the head of the device and to minimise microbial contamination due to sitting water. Internal eye/face wash strainer should also be removed and cleaned during this process or when required.

All shower units shall be inspected annually by a qualified technician to assure conformance with ANSI Z358.1-2009 or AS/NZS 4775- 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 Station 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)) ①
- ☐ 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) ②
- ☐ 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) ③
- ☐ 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) ④

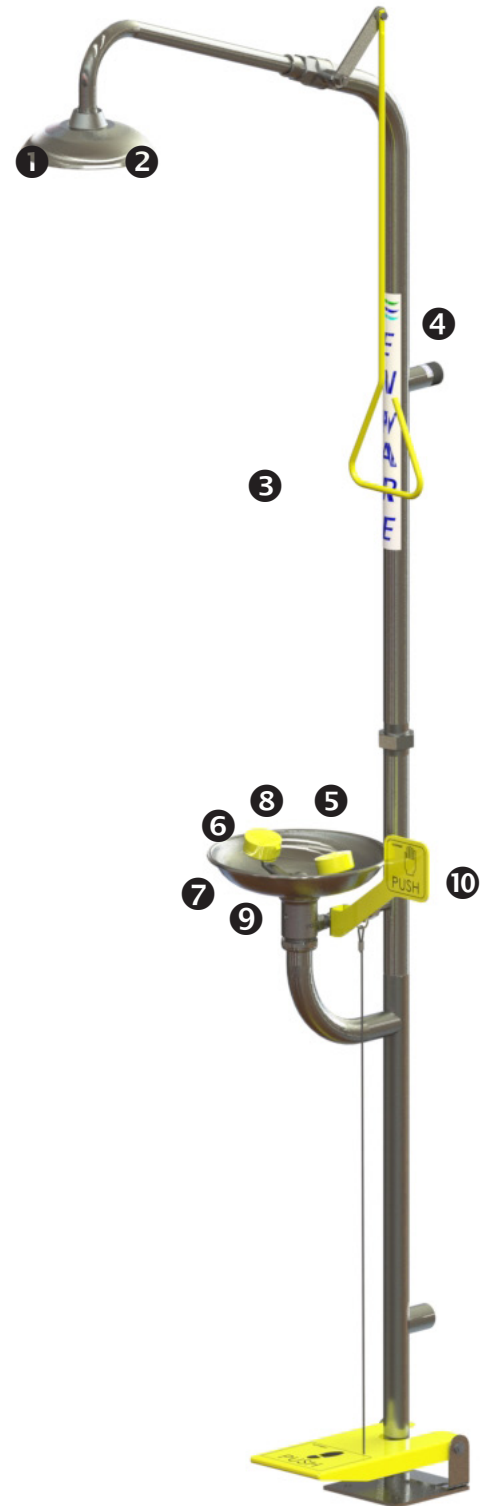


- ☐ Eye / face wash equipment shall deliver flushing fluid to the eyes simultaneously at a flow rate not less than 11.4 l/min at 210kPa. The flushing fluid streams should rise to approximately equal heights and should cover the areas between the interior and exterior lines of the test gauge when lowered not more than 38mm below the fluids peak. (Sec 8.1, 8.3, 9.1 (d)) ⑤
- ☐ 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)) ⑥
- ☐ 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)) ⑦

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 station 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) ❶
- ☐ 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) above the surface floor of the user. (Sec. 4.1.2, 4.1.4, 7.1) ❷
- ☐ 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) ❸
- ☐ 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) ❹
- ☐ 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) ❺
- ☐ 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) ❻
- ☐ 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) ❼
- ☐ Outlets shall be protected from airborne contaminants. (Sec. 5.1.3, 6.1.3, 7.1) ❽
- ☐ 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) ❾
- ☐ 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) ❿





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