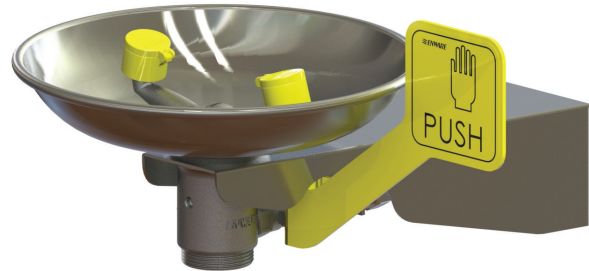


# WALL MOUNTED EMERGENCY EYE & EYE/FACE WASH – HAND OPERATED

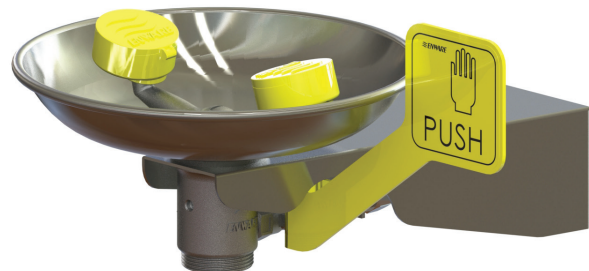
## Installation, Operating & Maintenance Instructions

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EEE120



EFE300



## THANK YOU FOR CHOOSING ENWARE

### MEDICAL AND INDUSTRIAL EXPERIENCES HAVE SHOWN THAT INITIAL FIRST AID TREATMENT FOR MANY HAZARDOUS CONTAMINANTS SHOULD BE TO WASH THE CONTAMINATED PART OF THE BODY AS SOON AS POSSIBLE.

Enware is Australia's leading manufacturer of 3rd party certified emergency deluge and decontamination equipment. Combining the latest manufacturing techniques and design innovations, Enware provides quality products world wide.

#### WIDE RANGE

Manufactured from stainless steel, our wide range of emergency deluge showers, eye/face wash units and platform showers are designed for personal safety, particularly in applications such as mining, petroleum and oil refineries, chemical manufacturing and handling, as well as laboratories and hospitals.

#### FLEXIBILITY

At Enware, our flexible manufacturing process means products can be customised to suit your individual needs. Whether it's a self-contained gravity fed shower or additional accessories such as emergency indicator lights and alarms, our design team has a solution for your application.

#### PRODUCT FEATURES

- Designed and manufactured in Australia
- Stainless steel construction provides superior durability and reliability
- Independently tested & Certified for compliance to ANSI Z358.1 and AS4775
- Stainless steel pipe work and stay open ball valve
- Push activated eye wash with soft aerated flow and integral auto open dust covers\*
- Zero velocity eye wash apex point provides greater flushing comfort and control\*
- Eye/face wash features 'Vertex Technology' where eye wash and independently angled face wash streams deliver optimum coverage\*



# SAFETY SHOWER, EYE & EYE/FACE WASH

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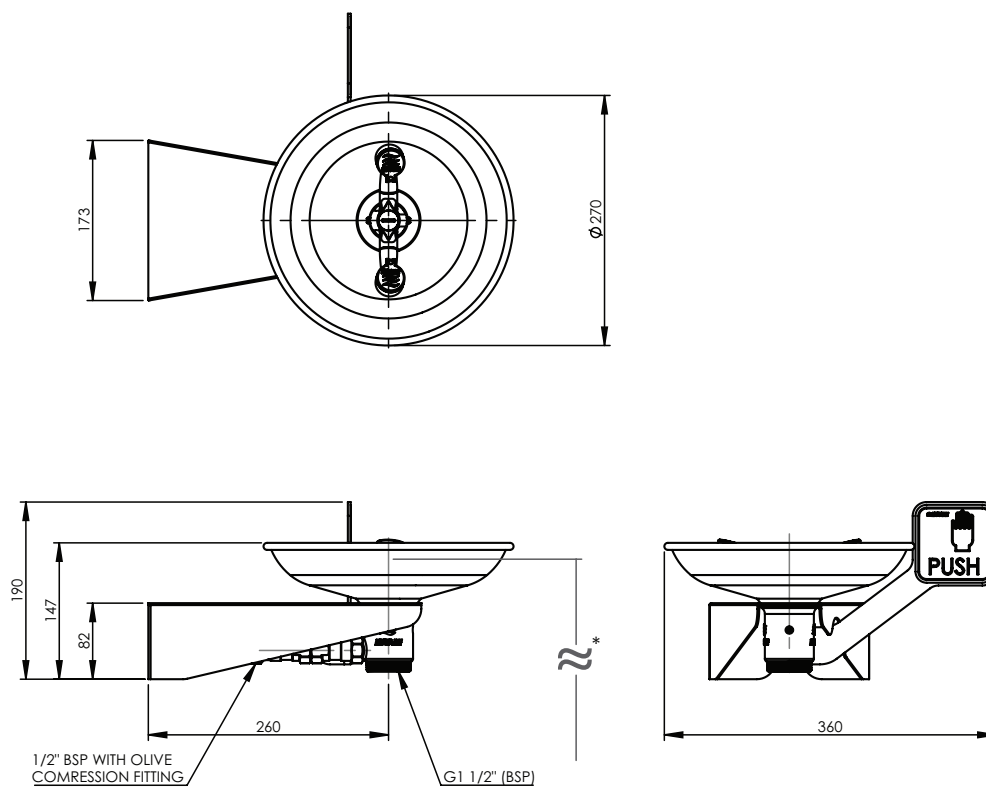
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# TECHNICAL INFORMATION

Inlet Connection	1/2" BSP male (DN 15mm)	
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)	
	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)	
	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	
Waste water outlet connection	G 1-1/2" BSP	
Approximate Shipping Weight	5 kg	
Shipping Dimensions	46cm x 36cm x 32cm	

## DIMENSIONS EEE120



\* The eye (eye/face) wash flushing fluid nozzles must be between 838 – 1143mm from the surface on which the user stands

# 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 checksheets on pages 9 and 10.

## 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

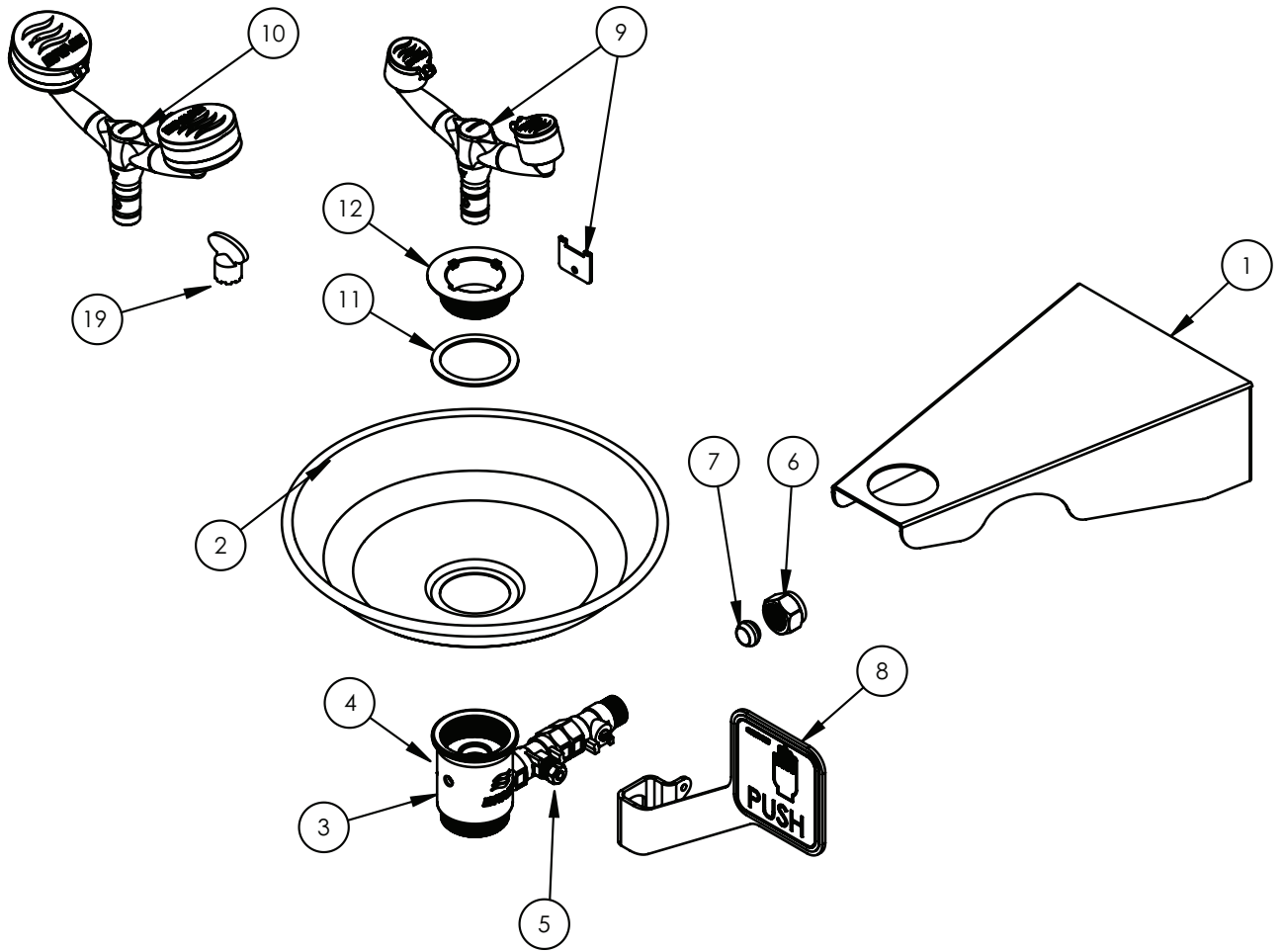
Continuous and timely irrigation of affected tissues for the recommended irrigation period are the principal factors in providing first aid treatment. Providing flushing fluid at temperatures conducive to use for the recommended irrigation period is considered an integral part of providing suitable facilities. 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.

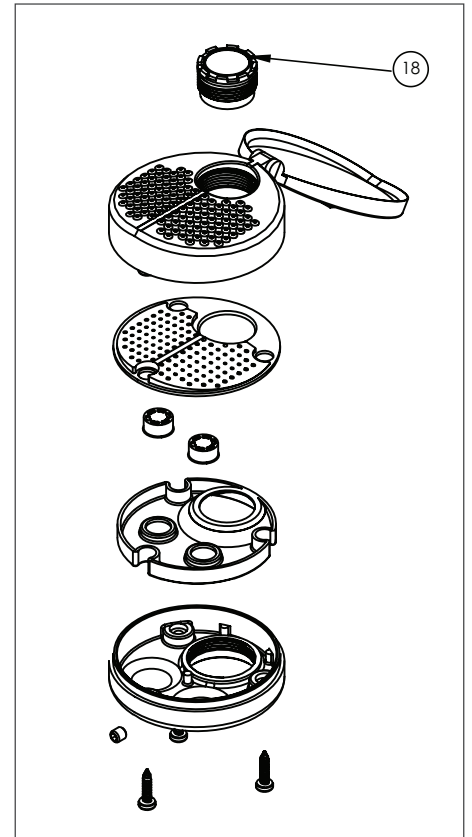
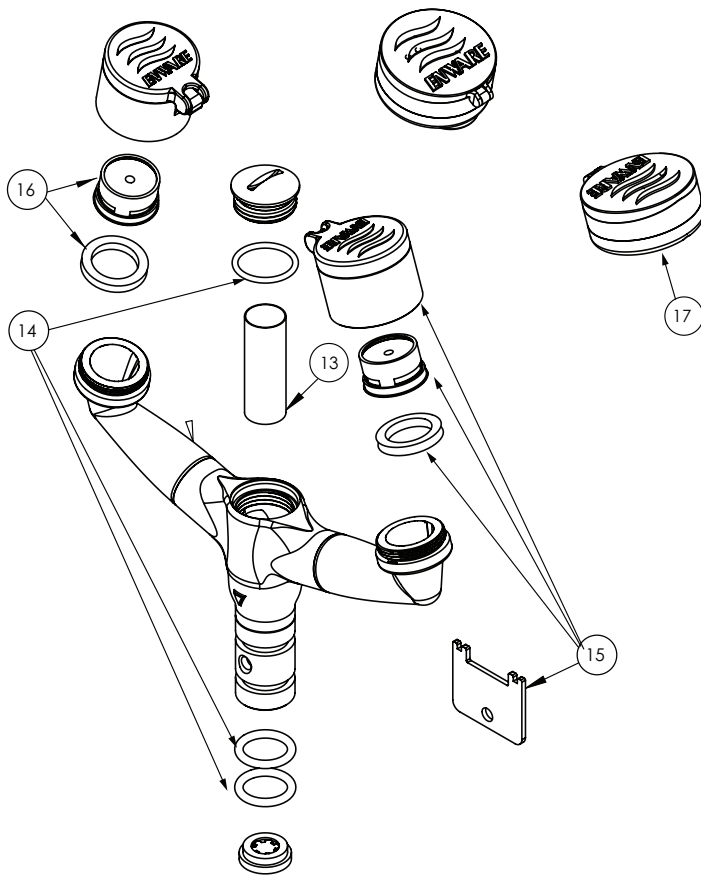
Before emergency eyewash and shower equipment is selected, a risk assessment shall be carried out to determine the most appropriate delivery temperature for the application. Means to ensure a constantly suitable delivery temperature shall also be identified during selection, so that equipment can perform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

# COMPONENTS EEE120 / EFE300



Item	Description	
1	Wall Bracket	
2	Bowl	ESPE008
3	Eye Wash Waste With Inlet Control Valve	ESPE818
4	Grub Screw M6 X 12Mm Waste Tee	ESPE814
5	Ball Valve And Flow Control Assembly FF half inch SS one piece	ESP005
6	Compression Nut 1/2"	
7	Nylon Olive 1/2" Bsp	
8	Push Handle	ESPE813
9	Eye Wash Outlet Tee Piece Assembly	ESPE815
10	Eye/Face Wash Outlet Tee Piece Assembly	
11	Waste Washer	
12	Waste 1-1/2"	
	Inspection Tag	ESS521
	Eye Wash Sign 250mm x 250mm Vinyl	ESS509

# COMPONENTS EYE / FACE WASH ASSEMBLY



Item	Description	
13	Mesh Filter 1/2" (40 Mesh)	ESPE811
14	O-rings for Eye & Eye/Face Wash Tee Piece (2x Spigot O-rings, 1x Strainer Cap O-ring)	ESPE812
15	Eye Wash Dustcover With Aerator (1 Pair) and key	ESPE016
16	Aerator and Washer to Suit Eye Wash (1 each)	ESPE015
17	Eye/Face Wash Outlet (each)	ESPE012
18	Aerator to Suit Eye/Face Wash	ESPE013
19	Aerator Key to Suit Eye/Face Wash Only	ESPE014

# ASSEMBLY / INSTALLATION PROCEDURE

1. 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 1 ►

2. Place the Bowl on top of the bracket, and locate the Waste Adaptor below the bracket as shown. SEE IMAGE 2 ►

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. Hold the waste adaptor while doing this so that the ball valve remains straight. (If the bowl is already assembled, check to see if the bowl is loose, and tighten as required.)

3. Take off the plastic cover cap off the eye (eye/face) wash assembly to expose the two pre-greased O-rings. SEE IMAGE 3 ►

4. Push the eye (eye/face) wash assembly into the centre of the waste adaptor making sure the directional arrow is facing the front. Ensure it is pushed all the way in so it bottoms out. Now tighten the grub screw from the front of the waste adaptor until it locates within the groove of the eye (eye/face) wash assembly. SEE IMAGE 3 ►

5. Determine the position and height of the eye (eye/face) wash. The eye (eye/face) wash flushing fluid nozzles must be between 838mm – 1143mm from the surface on which the user stands, and 153mm minimum from the wall or nearest obstruction. (Reference: AS/NZS 4775 - 2007)

6. Fix the bracket onto a solid wall using two anchor bolts through the two holes in the bracket. (Anchor bolts are not supplied) Use a fixing method appropriate for the installation and ensure the bracket is installed level. SEE IMAGE 4 ►

7. Connect water supply to the 1/2" BSP inlet thread of control valve. Ensure that the line is flushed to eliminate any debris before connecting.

8. Connect drain line to the 1-1/2" BSP thread of the bowl sink outlet.

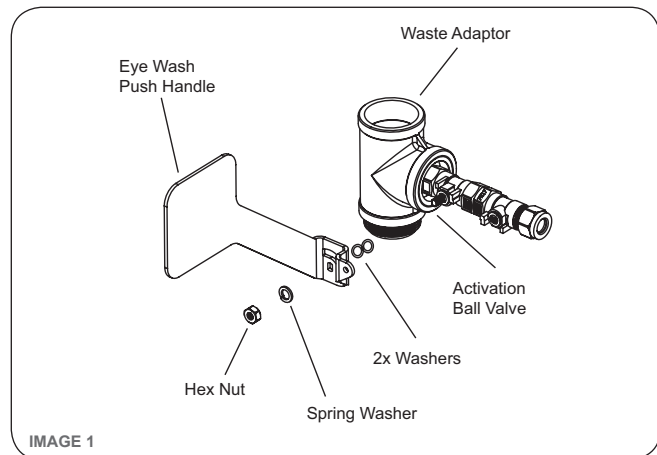


IMAGE 1

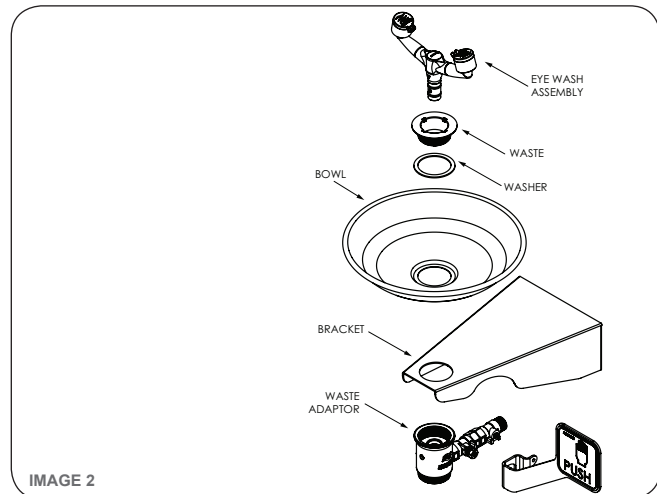


IMAGE 2

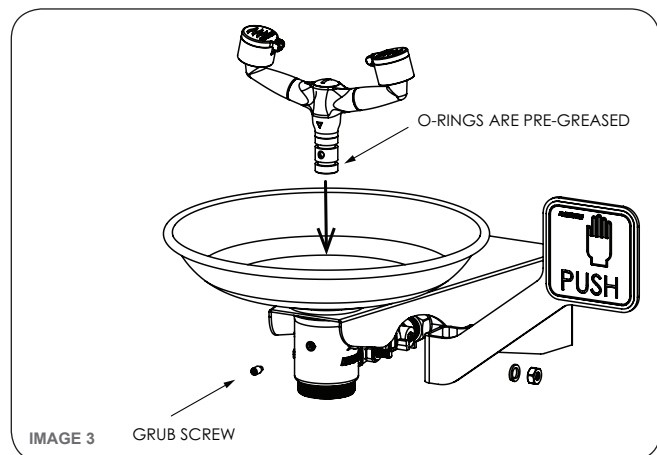


IMAGE 3

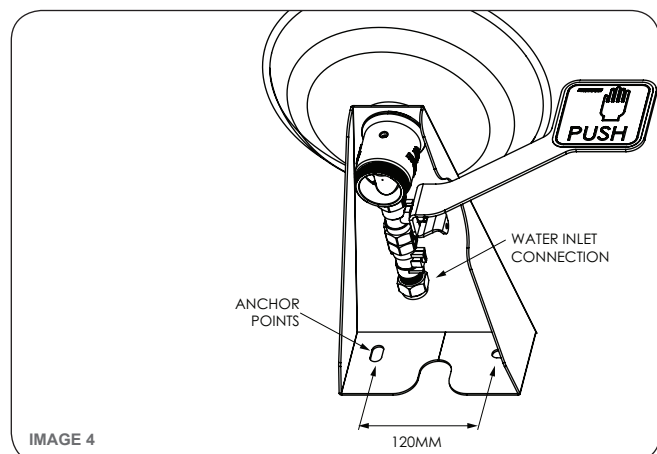


IMAGE 4



## TESTING & COMMISSIONING

1. Before turning on the water supply to the unit make sure Eye (Eye/Face) wash valve is closed. Pull forward the Eye (Eye/Face) wash “PUSH” handle back up to ensure the valve is in the closed position. SEE IMAGE 5 ►
2. Turn water supply on. Check for leaks before proceeding.
3. Slowly push the “PUSH” handle forward to start the water flow. Flush until the water runs clean then pull back on the push handle to stop flow. SEE IMAGE 5 ►
4. Remove internal strainer by unscrewing the strainer cap with a flat head screw driver. Clean the strainer and fit the strainer back. SEE IMAGE 6 ►
5. Use a flat screwdriver to turn off the Ball Valve before Eye (Eye/Face) Wash Activation ball valve. Turn the push handle to the full open position and adjust the second ball valve with screwdriver until the correct flow is achieved. SEE IMAGE 7 & 8 ▼
6. Once correct operation has been checked, turn off the valve by positioning the handles back up to the fully OFF position. SEE IMAGE 5 ▲
7. Place dust covers over Eye (Eye/Face) wash outlets.
8. Mount appropriate Eye (Eye/Face) wash signage as required. (Enware part code ESS509 - refer to Enware Product Guide or call Enware Customer Service on 1300 369 279)

## EYE, EYE/FACE WASH OPERATION

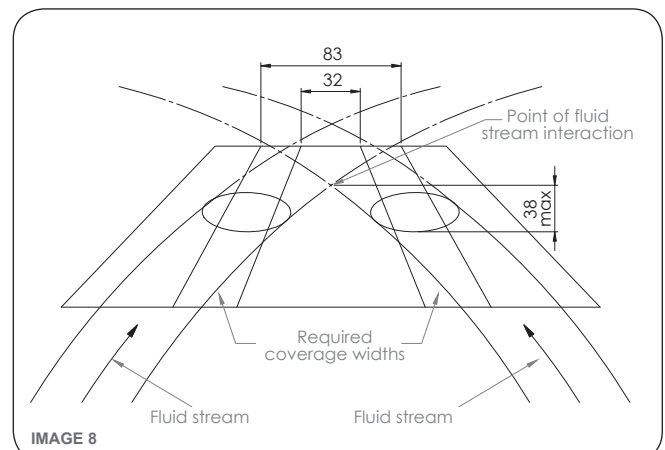
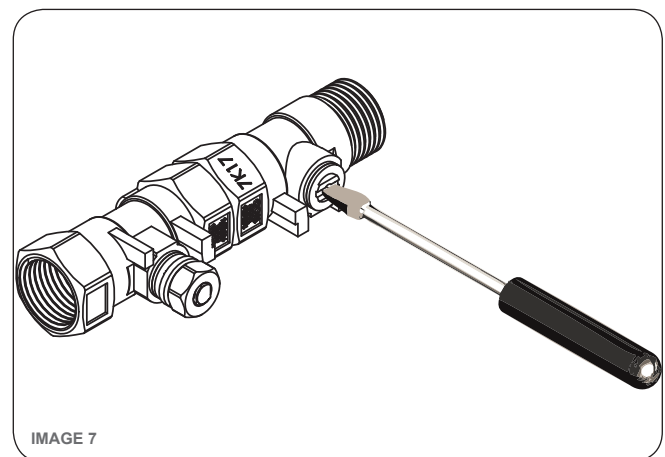
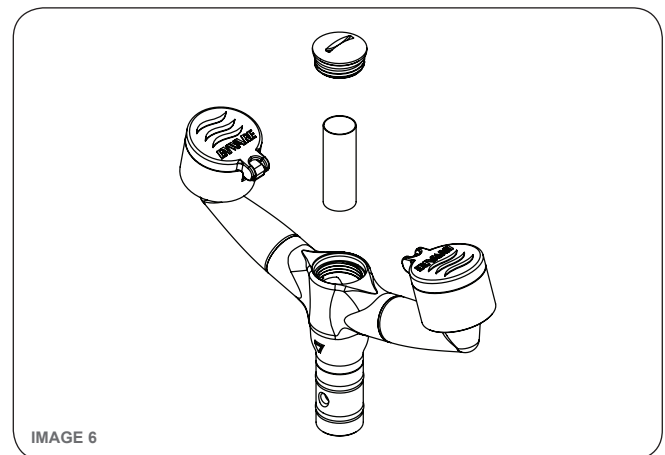
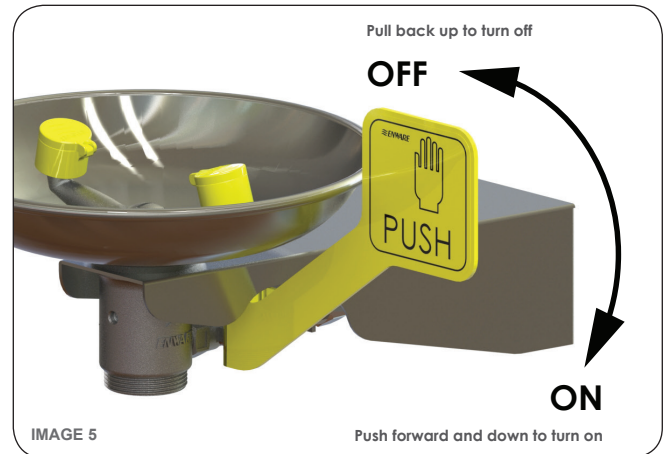
The Eye/Face wash is activated by pushing forward (away from the user) the flat “PUSH” handle. This opens the ½” ball valve allowing water to flow to the Eye, Eye/Face wash outlets. To close the valve and stop flow, gently pull the handle back up (towards the user). SEE IMAGE 5 ▲

## 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 build up 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.

SEE IMAGE 6 ►



# 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 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)
- 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)
- 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 when lowered not more than 38mm below the fluids peak. (Sec 7.1, 9.1 (c), 7.3.1) 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)) ②



- 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)) ③
- 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)) ④

# 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 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))
- 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)
- 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) ❶
- 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) ❷
- 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) ❸
- Outlets shall be protected from airborne contaminants. (Sec 5.1.3, 6.1.3, 7.1) ❹
- 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) ❺
- 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) ❻





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