

## Product Manual

### B-Safety ClassicLine & PremiumLine Emergency Eyewash and Eye/Face Wash Equipment

#### 1. Application

Emergency eyewash and eye/face wash equipment are prescribed first aid installations for workplaces where hazardous substances are handled. They are used for flushing out the eyes or decontaminating visual fields of people in emergency situations. They are not a replacement for personal protective equipment. This manual must be left with the facility and people exposed to hazardous materials need to be trained in the operation of this equipment.

#### 2. Water Supply

B-Safety emergency eyewash, eye/face wash and shower equipment must be connected to the drinking water supply. Only handheld eyewash and eye/face wash equipment is equipped with a backflow prevention device. A risk assessment should be carried out to determine if any additional backflow prevention devices are necessary.

Pipework must be flushed before connecting emergency eyewash, eye/face wash and shower equipment to the water supply to prevent contaminants damaging the product. Issues resulting from pipework which has not been flushed will not be accepted under warranty.

#### 3. Standards and Regulations

Installation, commissioning and maintenance of B-Safety eyewash and eye/face wash equipment must be carried out by a designated, qualified and competent specialist. B-Safety eyewash and eye/face wash equipment is certified as compliant with AS 4775-2007 and ANSI Z358.1-2014. It must be installed, commissioned, operated and maintained in accordance with this B-Safety Product Manual and AS 4775-2007, as well as the Plumbing Code of Australia (PCA), AS/NZS 3500, the relevant Work Health and Safety (WHS) Regulations and any other applicable regulation. No liability is accepted for loss or damage which occurs as a result of failure to observe the operating and maintenance instructions and the operating conditions.

#### 4. Specifications

Max Static Pressure	1000 kPa	
Max Dynamic Pressure	500 kPa	
Minimum Dynamic Pressure	210 kPa	
	Minimum flow rate at 210 kPa dynamic pressure required to achieve AS/NZS 4775-2007 and ANSI Z358-2014 compliance*	B-SAFETY resultant flow rate when tested at 210 kPa dynamic pressure*
Single Spray Head Eyewash	1.5 L/min	>5 L/min (flow regulator fitted)
Double Spray Head Eyewash and Eye/Face Wash	1.5 L/min (Eyewash) 11.4 L/min (Eye/Face wash)	>12 L/min (flow regulator fitted)
Double Spray Head Eyewash and Eye/Face wash with White Bowl	1.5 L/min (Eyewash) 11.4 L/min (Eye/Face wash)	>12 L/min
Water Supply Inlet Pipework Minimum Size	15mm OD for emergency eyewash and eye/face wash equipment 40mm OD for emergency shower equipment	

\* As per AS 4775-2007 the installer needs to ensure that when installed, the eyewash and eye/face wash equipment achieves the minimum flow rate in the above table.

Please note the following in relation to flow rates:

- Single head eyewash equipment and Eyewash and Eye/face wash equipment are fitted with a flow regulator. The installer needs to assess whether the flow regulator should be removed, when pressures are lower than 210 kPa. Factors to consider may include whether the flow rate is sufficient. Please refer to AS 4775-2007.
- Eyewash and Eye/Face wash equipment in white bowl includes an angle valve fitted for flow regulation. The installer needs to assess whether the angle valve should be adjusted, particularly when pressures are lower than 210 kPa. Factors to consider may include whether the flow rate is sufficient. Please refer to AS 4775-2007.

## 5. Recommended Water Flushing Temperatures

B-Safety recommend tempered water with a flushing temperature between 15.6°C and 25°C is used for emergency eyewash, eye/face wash and shower equipment. The water supply must be guaranteed for at least 15 minutes of flush time. Please refer to the recommendation in AS 4775-2007 that the fluid shall be delivered at a tepid temperature – (*'A recommended temperature range for tepid fluids is 15.6°C to 37.8°C.'* – AS 4775-2007).

A risk assessment shall be undertaken and documented during design and installation. It should then be reviewed on a periodic basis to determine the appropriate water flushing temperature for the application. As part of this process, it may be helpful to consult medical and work health and safety professionals and suppliers of hazardous chemicals to determine the flushing temperature. The person responsible for work health and safety at the facility should be involved in this process.

## 6. Location and Installation Height

The B-Safety emergency eyewash and eye/face wash equipment must be installed as close as possible to the hazardous workplace. Access must always be unobstructed and positioned in an accessible location for immediate use. It shall require no more than 10 seconds for a person to reach and as a guide this may mean a maximum of 10 metres away. However, there are situations where the equipment must be much closer. We recommend a maximum distance of 3 to 5 metres if highly corrosive substances are being used.

Please refer to AS 4775-2007 for specific information regarding location and installation height. The area around the equipment must be well illuminated and clearly marked with easily visible signs. A risk assessment shall be undertaken and documented during design and installation. It should then be reviewed on a periodic basis to determine the most appropriate location. As part of this process, it may be helpful to consult medical and work health and safety professionals and suppliers of hazardous chemicals. The person responsible for work health and safety at the facility should be involved in this process.

## 7. Containment and Disposal of Fluids

A risk assessment should be carried out and documented to determine the most appropriate method for the proper containment and disposal of waste flushing fluids. An adequate sized drain must be installed.

## 8. Installation

Installation must be carried out in accordance with AS 4775-2007, which includes a risk assessment to determine methods for the proper containment and disposal of waste flushing fluids from operating the equipment. In order to avoid damage to furnishings and floor, the eyewash and eye/face wash equipment should be installed in the vicinity of an adequately sized drain so the water emerging from the eyewash and eye/face wash equipment can be if necessary drained off securely into a suitably sized containment reservoir or tank. Every effort must be taken to avoid any damage or pollution being caused by escaping water when the emergency eyewash and eye/face wash

equipment is in use. In accordance with AS 4775–2007 wall mounted eyewash and eye/face wash must be installed with the flushing fluid nozzles between 838 mm and 1143 mm from the floor surface as well as 153 mm minimum from the wall or obstruction.

#### 8.1 Handheld and Fixed Eyewash and Eye/Face Wash (table mounted)

Install using the table mounting accessories M28x80 mm. A drill hole of 30 mm diameter should be made in the table top at a suitable point. The table mounting accessories are attached through the plastic rosette and back nut underneath the table top.

#### 8.2 Handheld and Fixed Eyewash and Eye/Face Wash (wall mounted)

Install using the wall flange provided or the corresponding bracket. The wall flange or bracket must be fitted on a level surface (wall) with a suitable attachment system. The best method of installation can be determined by the installer on site depending on the design.

#### 8.3 Handheld Eyewash and Eye/Face Wash with Combined Bracket (wall/table mounted)

Install using the combined wall and table bracket. When using the combined bracket as a wall bracket the brass tube must be unscrewed - please use a suitable tool for this purpose. The wall bracket must be fitted to a level surface with an attachment system to be established on site. Observe the notes from section 8.1 above when using as a table bracket.

#### 8.4 Eyewash and Eye/Face Wash Units with White Bowl (wall mounted)

Remove the base of the eyewash and eye/face wash. Drill pre-marked holes and align the eyewash and eye/face wash at the place of installation and mark attachment holes. The best method of installation can be determined by the installer on site depending on the design.

#### 8.5 Freestanding Eyewash and Eye/Face Wash with Bowl (floor mounted)

Freestanding eyewash and eye/face wash equipment must be bolted securely to the subsurface by means of attachment lugs. The best method of installation can be determined by the installer on site depending on the design.

#### 8.6 Eyewash and Eye/Face Wash with Foot Lever Actuation

Foot lever activations must be bolted securely to the subsurface. The pedal activation is either bolted to the lug provided on the ground plate or bolted securely to the subsurface. The best method of installation can be determined by the installer on site depending on the design.

The trigger rope is cut to length in the factory. On site ensure that the trigger rope opens the valve fully under appropriate load of the platform or pedal, but still has some play. If this play is not present the rope must be extended correspondingly otherwise the valve may be damaged. When the return spring is fitted on site ensure that the spring holds the platform / pedal at the correct height and that there is no load on the trigger rope to the valve.

#### 8.7 Eyewash in Stainless Steel Cabinet

Drill pre-marked holes and align the eyewash at the place of installation and mark attachment holes. The best method of installation can be determined by the installer on site depending on the design.

#### 8.8 Frost Protected Self-Draining Eyewash and Eye/Face Wash Equipment with Draining in a Frost Protected Area

The water connection and the feed to the eyewash and eye/face wash equipment must be installed in a frost protected area. During installation of the trip valves and eyewash and eye/face wash equipment, it is important that

the water feed line to the equipment slopes down to the eyewash and eye/face wash so that the eyewash and eye/face wash equipment is emptied automatically.

#### 8.9 Frost Protected Self-Draining Eyewash and Eye/Face Wash Equipment with Underfloor Actuation

The stainless steel box in which the activation and drainage are located must be placed on a ballast/gravel bed so that the water present in the eyewash and eye/face wash equipment can run off into the soil without any obstruction.

### **9. Safety Marking**

Safety marking is provided (self-adhesive information sign) and should be affixed beside the B-Safety eyewash and eye/face wash equipment in accordance with AS 4775-2007 and AS 1319.

### **10. Eyewash and Eye/Face Wash Operation**

Always refer to the material safety data sheets (MSDS) of hazardous substances used in the location where the emergency equipment is installed for first aid advice on those substances. In an emergency seek medical attention immediately. People who may be exposed to hazardous materials shall be trained in the location and proper operation of this emergency equipment.

During eye flushing the contaminated eye(s) and its surroundings must not make contact with the eyewash and eye/face wash equipment including the black rubber protection. This black rubber protection is designed to protect the person from impact injuries. An optimum rinsing effect is attained at a distance of approximately 150 mm. At this height the diameter of the spray stream is approximately 80 mm. It is recommended that the eye is kept open with both hands for application.

The handheld eyewash and eye/face wash head(s) must be emptied after each use with the eyewash and eye/face wash being held downwards. This helps to remove stagnant water from the eyewash and eye/face wash head, thereby reducing the danger of contamination.

#### 10.1 Operation of Handheld Eyewash and Eye/Face Wash

The B-Safety handheld eyewash and eye/face wash is activated by pressing the button which is integrated in the handle. Once activated the button locks in the open position. The eyewash and eye/face wash is closed by pressing again and pulling the lock down at the same time.

If the B-Safety handheld eyewash and eye/face wash is fitted correctly it is possible to operate the eyewash and eye/face wash both inside and outside the bracket (table mounting, wall bracket). Operation of the eyewash and eye/face wash while secured in the bracket makes it possible for the injured person to hold the lids of the contaminated eyes open using both hands at the same time. The eyewash and eye/face wash can also be taken away from the bracket. In this way it is also possible to treat other body parts and injured people who are lying on the floor.

#### 10.2 Operation of Eyewash and Eye/Face Wash with PUSH Lever

The activation of the B-Safety eyewash and eye/face wash occurs by pressing the large PUSH lever. The PUSH lever locks in the open position. The eyewash and eye/face wash equipment is closed by pulling the PUSH lever back.

#### 10.3 Operation of Eyewash and Eye/Face wash Units with White Bowl with Lid

The activation of the B-Safety eyewash and eye/face wash units with white bowl and lid occurs by pulling down the lid. The eyewash and eye/face wash unit includes an angle valve fitted for flow regulation. It is possible to adjust the

spray height depending on the water pressure on site using the angle valve. The eyewash and eye/face wash unit is closed by pushing the lid back.

#### 10.4 Operation of Eyewash and Eye/Face wash Units with White Bowl and PUSH Lever

The activation of the B-Safety eyewash and eye/face wash unit with white bowl occurs by pressing the PUSH lever. The PUSH lever locks in the open position. The eyewash and eye/face wash equipment is closed by pulling the PUSH lever back.

#### 10.5 Operation of Eyewash and Eye/Face Wash in Stainless Steel Cabinet

The activation of the B-Safety eyewash and eye/face wash in stainless steel cabinet occurs by pulling down / opening the cover downwards. The cover locks in the open position. The eyewash and eye/face wash is closed by pushing the cover back.

#### 10.6 Operation of Eyewash and Eye/Face Wash with Foot Lever or Platform Activation

The activation of the B-Safety eyewash and eye/face wash with foot lever or platform activation occurs by stepping down on the foot lever or platform. Closing the eyewash and eye/face wash equipment occurs by pushing the valve back into the closed position.

### 11. Maintenance and Care

The eyewash and eye/face wash equipment must be inspected for externally visible damage and defects after installation, prior to initial start-up and subsequently at the time periods stated below and following modifications or repairs.

B-Safety eyewash and eye/face wash equipment must have their functionality checked once a week (AS 4775-2007). It should be activated for approximately 5 seconds for this purpose. In this way the function is tested and the stagnant water in the equipment is replaced by fresh water (to reduce microbial contamination) and sediment is flushed out.

All eyewash and eye/face wash equipment must be inspected annually to ensure continuous readiness for operation of the equipment and conformance with the requirements of AS 4775-2007. As part of the annual inspection the following should be checked: leaks, contamination such as dust or calcium deposits, defective parts, corrosion, signage, temperature of water (e.g. heating of water from the sun or freezing) and flow. The hose of the handheld eyewash and eye/face wash equipment must be examined for possible twists, kinks or other forms of damage. Defective parts must be replaced immediately. The backflow prevention device which is installed at the inlet to the handpiece must be replaced every two years.

A tag must be permanently attached to each eyewash and eye/face wash equipment and should be marked at the successful completion of each annual inspection.

Test	Interval	Who	Reason
<b>Functional Test</b>	Weekly	End User	<ul style="list-style-type: none"> <li>Protection against contamination from stagnant water (regular change of the standing water)</li> <li>Ensuring the short-term readiness for operation of the equipment</li> </ul>
<b>Extensive Service</b>	Annually	Qualified Specialist	<ul style="list-style-type: none"> <li>Ensuring the continuous readiness for operation of the shower</li> <li>Replace any backflow prevention device every 2 years</li> </ul>

### 12. Care

In the event of contamination or calcium deposits the eyewash and eye/face wash equipment should be cleaned properly with a suitable cleaning agent which is not aggressive towards the fittings and then rinsed with water following use. High pressure cleaners must not be used.

### 13. Faults

Leaking may occur in the handheld eyewash and eye/face wash equipment due to impurities in the water system. In this case disconnect the handheld eyewash and eye/face wash from the water supply. Activate the equipment without pressure a few times and rinse the pipe thoroughly prior to reconnection.

Fault	Possible Cause	Possible Solution
The quantity of water which flows out of the eyewash or eye/face wash does not appear to be sufficient	<ul style="list-style-type: none"> <li>Water pressure is too low or diameter of the feed pipe is too small</li> <li>Strainer filter contaminated</li> <li>Flow regulator defective</li> </ul>	<ul style="list-style-type: none"> <li>Check the pipework to make sure that the pipe size is adequate for the required flow rate and that the available water pressure is also capable of delivering the required flow rate</li> <li>Clean the strainer filter</li> <li>Change the flow regulator</li> </ul>
Eyewash and eye/face wash is leaking	<ul style="list-style-type: none"> <li>Impurities in water settling in front of valve</li> <li>The valve is not closing properly</li> </ul>	<ul style="list-style-type: none"> <li>Rinse the pipework thoroughly and reconnect</li> <li>Check the valve stop for damage and ensure that the valve is pressed back into a completely closed position</li> </ul>
Eyewash and eye/face wash is leaking	<ul style="list-style-type: none"> <li>Valve seal is damaged</li> </ul>	<ul style="list-style-type: none"> <li>Change the valve</li> </ul>
Eyewash and eye/face wash does not switch off automatically after use	<ul style="list-style-type: none"> <li>This is NOT a fault according to AS 4775-2007</li> </ul>	<ul style="list-style-type: none"> <li>This is NOT a fault according to AS 4775-2007</li> </ul>

### 13. Disposal

The emergency eyewash and eye/face wash equipment can be fully dismantled. The individual sections such as metal, insulation and other parts may be sent for recycling separately. National and local waste disposal regulations must be observed.