

## INSTALLATION OPERATION AND MAINTENANCE MANUAL

Eyewash, Eye/Face-wash, wall mounted

### 1. GENERAL INFORMATION

#### 1.1. MODEL DESCRIPTION

Model No.	Description
3830, 3830-00	Wall model without bowl, flow rate ca 28 l/min
3863, 3863-00, 3884	Wall model with bowl and without lid, flow rate of ca 14 l/min
3864, 3864-00, KN1724P	Wall Model with bowl and without lid, flow rate of ca 28 l/min
3866, 3866-00	Wall Model with bowl and lid, flow rate of ca 28 l/min
3867, 3867-00	Wall Model with bowl, drench hose and without lid, flow rate ca 28 l/min
3868, 3868-00	Wall Model with bowl and lid, flow rate ca 14 l/min

#### 1.2. KRUSMAN WARRANTY POLICY

The following warranty information by Krusman Emergency Showers is the official policy. [Click here](https://www.krusman.com/wp-content/uploads/sites/2/2020/11/limited-warranty-policy.pdf) or view on “<https://www.krusman.com/wp-content/uploads/sites/2/2020/11/limited-warranty-policy.pdf>”. No other warranties expressed or implied are authorized by Krusman Emergency Showers.

#### 1.3. LOCATION OF UNIT

Emergency eyewash installations should adhere to the following recommendations:

- Distance from chemical hazard to emergency eyewash of less than 20m without stairs or ramps or any obstacles between, or time of less than 10s to get to the emergency eyewash.
- Emergency eyewash located in a clearly visible and easily identifiable place, and as far as possible on a regularly taken path, inside the area exposed to the risk, without en-route hindrance by potential obstacles (partitions, doors, steps, corridors, etc.)
- Emergency eyewash sheltered from contamination sources and well away from electricity sources.

#### 1.4. SAFETY SIGNS

The emergency eyewash unit should be clearly identified as an emergency eyewash station by installing respective safety signs on the unit. Emergency signs are enclosed with each emergency eyewash unit.

## 1.5. PLUMBING CONNECTIONS

- Minimum recommended inlet: ½" female
- Minimum recommended inlet dynamic pressure: 2,4 bar (Max 6,5 bar. If pressure exceeds 6,5 bar it will be necessary to install a suitable pressure reducing valve available at Krusman, contact your salesperson for details). These supply line requirements are necessary for the unit to have optimal performance (flow rate of eyewash).
- Drain: 1¼" female (if applicable).

## 2. INSTALLATION

### 2.1. INSTALLATION STEPS

**Note:** It is strictly advised to refer to the **Installation/customer drawing** provided with the respective model (also available at the website for each model) for installation.

#### a) Unpacking procedure

- The product is delivered by standard in a carton box with the Krusman logo.
- One complete unit is assembled and wrapped with carton wrappers in each carton box.



Figure 1: Emergency eyewash packed

#### b) Pre-installation

- Locate the installation, operation and maintenance manual provided inside the box-it will come in handy.

**Note:** Eyewash shown in this manual may vary depending on the model, but the installation, operation and maintenance steps are the same for all model numbers mentioned within this manual.

#### c) Unit installation

- Locate the eyewash.
- Mount the eyewash to the wall at a height of 1100mm measured from the floor to the upper edge of the spray head.

- Krusman recommended screw size for mounting the eyewash, are shown in Figure 2 and Figure 3.



Figure 2: Wall mount for eyewash with three holes pattern 3x Ø8



Figure 3: Wall mount for eyewash with four holes pattern 4x Ø8

- For the eyewash model 3867, 3867-00 mount the drench hose on the wall close to the eyewash station.

#### d) Valve actuators eyewash

- The push plate is pre-installed to the eyewash, and it is used for activating the eyewash.
- The push plate is in vertical position, when the eyewash valve is closed, refer to Figure 4.



Figure 4: Push plate in closed position

- The push plate is pushed backward to open the eyewash valve and to activate the eyewash, refer to Figure 5.



Figure 5: Push plate in open position

e) Connectivity for eyewash

- Connect the inlet pipe to the provided eyewash inlet, refer to Figure 6.



Figure 6: Eyewash inlet

- For the eyewash model 3830, 3830-00 the inlet connection is at a T-coupling, which can be rotated to face either side of the water supply line, refer to Figure 7.



Figure 7

- Connect the drain to the eyewash drain, refer to Figure 8.



Figure 8 : Eyewash drain

f) Attach the eyewash sign

- Locate the eyewash sign, refer to Figure 9 and mount it to the wall.
- Provided it should be clearly visible.

## 2.2. CHECKS AFTER INSTALLATION

- Check the inlet connection, provided there should not be any leakage.
- Check the function of the eyewash by flushing several times. Observe that the push plate is not self-closing.

**Note:** Flush the eyewash, drench hose (model no: 3867, 3867-00) thoroughly to make sure grindings and other particles are removed from filter.



Figure 9: Eyewash sign

## 3. OPERATION

### 3.1. COMMISSIONING

#### 3.1.1. PREPARATION FOR USE

The following steps should be completed to prepare the system for use.

- Close valve to eyewash (push plate).
- Hand over the instruction sheet to the safety supervisor or other responsible personnel.

### 3.2. ACTIVATION

#### 3.2.1. TEST RUN THE EYE WASH

- The eyewash is activated by pushing the push plate backward. The valve is not self-closing.

**Note:** The water is shut off when the push plate is pulled to the initial position.

- Drench hose (model no: 3867, 3867-00) is activated by depressing the handle. Locking clip engages when handle is depressed, providing “hands free” operation.

**Note:** Valve stays open until locking clip is released.

## 4. MAINTENANCE

### 4.1. FREQUENCY OF TESTING

The emergency eyewash should be tested at least every month or more. It is recommended to flush the emergency eyewash on a weekly basis to avoid stagnant water and risks like harmful bacteria.

4.2. METHOD OF TESTING

Date: \_\_\_\_\_

Area: \_\_\_\_\_ Model number: \_\_\_\_\_

Tag number: \_\_\_\_\_ Serial number: \_\_\_\_\_

**Visual inspection checklist:**

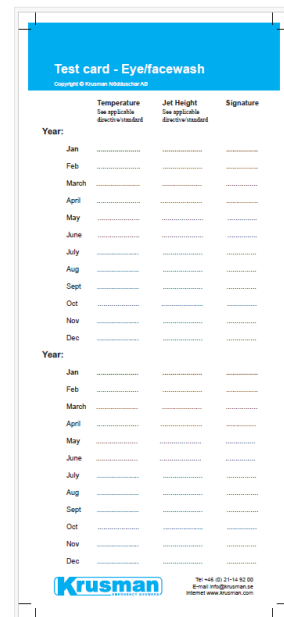
Task	Ok	Not ok
Unit Visibility		
Area free of debris (Within 10 seconds from hazard, out of potential spray path)		
Area light/Alarm light/Interior light (if any)		
Sign condition		
Eyewash covers attached and in place on nozzles		
Valves (Leaking: <input type="checkbox"/> Eyewash .. <input type="checkbox"/> Shower (if any))		
Observe that the push plate is not self-closing and operated smoothly		
Filters, nozzles, protective cover ( <input type="checkbox"/> Adjustment <input type="checkbox"/> Replacement)		

**Operational inspection checklist:**

Task	Ok	Not ok
Eyewash volume (Min. 0.4 gpm / 1.5 lpm), according to ANSI standard Eyewash volume (Min. 1.6 gpm / 6 lpm), according to EN standard		
Eyewash jet height (Max. 203 mm), according to ANSI standard Eyewash jet height (Min. 100 mm / Max. 300 mm), according to EN standard		
Eyewash velocity, non-injurious to user ( <input type="checkbox"/> Too High <input type="checkbox"/> OK)		
Operate simultaneously		
Alarm test: (if any)  Remote (Eyewash <input type="checkbox"/>  Local (Eyewash <input type="checkbox"/>		

**4.3. USE OF CONTROL CARD**

- Krusman provides a test card with the emergency shower which can be used to monitor the functionality and record inspection activities of the emergency shower on a monthly basis.
- Documenting the observations on a regular basis ensures that the emergency eyewash is always ready for immediate use in case of emergencies



**Test card - Eyefacewash**  
Copyright © Krusman Manufacturer AB

Year:	Temperature (as applicable See EN standard)	Jet Height (as applicable See EN standard)	Signature
Jan	.....	.....	.....
Feb	.....	.....	.....
March	.....	.....	.....
April	.....	.....	.....
May	.....	.....	.....
June	.....	.....	.....
July	.....	.....	.....
Aug	.....	.....	.....
Sept	.....	.....	.....
Oct	.....	.....	.....
Nov	.....	.....	.....
Dec	.....	.....	.....
Year:			
Jan	.....	.....	.....
Feb	.....	.....	.....
March	.....	.....	.....
April	.....	.....	.....
May	.....	.....	.....
June	.....	.....	.....
July	.....	.....	.....
Aug	.....	.....	.....
Sept	.....	.....	.....
Oct	.....	.....	.....
Nov	.....	.....	.....
Dec	.....	.....	.....

**Krusman** Tel +46 (0) 21-14 92 00  
E-mail: info@krusman.se  
Internet: www.krusman.com

Figure 10: Test card

## 5. TROUBLESHOOTING

Issue	Problem	Solution
Low or Inconsistent Water Flow	<ol style="list-style-type: none"> <li>1. Blockages in the water lines</li> <li>2. Low water pressure in the supply network</li> <li>3. Malfunctioning valve</li> <li>4. Debris in eyewash spray head</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for blockages in the pipeline and clear them</li> <li>2. Ensure the supply pressure meets a minimum of 2,4 bar (dynamic pressure)</li> <li>3. Verify the valve is functioning correctly and replace if faulty</li> <li>4. Inspect and clean or replace any clogged spray heads or filters</li> </ol> <p><b><u>(Article no. KND506 7lit/min alt KND508 14lit/min)</u></b></p>
Temperature of Water is Too Hot or Too Cold	<ol style="list-style-type: none"> <li>1. No temperature control in the supply</li> <li>2. Malfunctioning mixing valve</li> <li>3. Fluctuations in the water supply temperature</li> </ol>	<ol style="list-style-type: none"> <li>1. Install a thermostatic mixing valve (tempering valve) to maintain a tepid water temperature</li> <li>2. Inspect the mixing valves regularly to ensure they are functioning correctly</li> <li>3. Check the main water heater or supply network to ensure temperature consistency</li> </ol>
Water is Contaminated or Stagnant	<ol style="list-style-type: none"> <li>1. Lack of regular flushing</li> <li>2. Poor water quality</li> </ol>	<ol style="list-style-type: none"> <li>1. Implement a weekly flushing schedule to clear stagnant water Note: Krusman provides hygienic self-flushing modules for regular and automatic flushing of the stagnant water without need of manual human intervention</li> <li>2. Install filters to remove impurities</li> </ol>

Please refer to the **Spare parts list** provided with each model on our website for any spare parts requirements, and for more information on Krusman Emergency Showers, please visit: [www.krusman.com](http://www.krusman.com)