



INSTALLATION OPERATION AND MAINTENANCE MANUAL

Eyewash, Eye/Face-wash, floor model

1. GENERAL INFORMATION

1.1. Model description

Model No	Description
3869, 3869-00	Floor model with bowl, flow rate ca 28 l/min
3870, 3870-00	Floor model with bowl, flow rate of 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: 1" female

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 the manual may vary depending on the model, but the installation, operation and maintenance manual steps are the same for all model numbers mentioned within this manual.

c) Unit installation

- Anchor the floor flange to the floor using bolts that are appropriate to the flooring material.
- Krusman recommended screw size for anchoring the eyewash, is shown in Figure 2.



Figure 2: Anchoring eyewash 4x Ø10

d) Valve actuators eyewash

- The push plate is pre-installed to the eyewash, and it is used for activating eyewash.
- The push plate is in vertical position, when the eyewash valve is closed, refer to Figure 3.



Figure 3: Push plate in closed position

- The push plate is pushed backward to open the eyewash valve and to activate the eyewash, refer to Figure 4.



Figure 4: Push plate in open position

e) Connectivity for eyewash

- Connect the inlet pipe to the provided eyewash inlet, refer to Figure 5.
- Connect the drain to the eyewash drain, refer to Figure 6.



Figure 5: Eyewash inlet

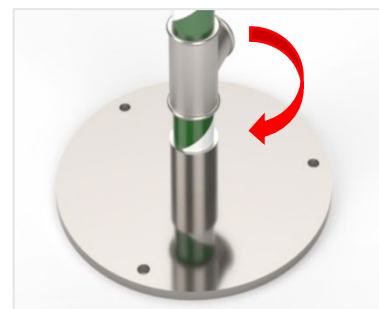


Figure 6 : Eyewash drain

f) Attach the eyewash sign

- Locate the eyewash sign and mount it to the eyewash, refer to Figure 7.
- 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 thoroughly to make sure grindings and other particles are removed from filter.

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 eye wash 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 back to the initial position.

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.



Figure 7: Eyewash sign mounted to the eyewash

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		
Insulation and covers (<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 (if applicable)		
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 - Eye/facewash
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	Temperature <small>See applicable direction/instruction</small>	Jet Height <small>See applicable direction/instruction</small>	Signature
Year:			
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

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Figure 8: Test card

5. TROUBLESHOOTING

Issue	Problem	Solution
Low or Inconsistent Water Flow	<ol style="list-style-type: none"> 1. Blockages in the water lines 2. Low water pressure in the supply network 3. Malfunctioning valve 4. Debris in eyewash spray head 	<ol style="list-style-type: none"> 1. Check for blockages in the pipeline and clear them 2. Ensure the supply pressure meets a minimum of 2,4 bar (dynamic pressure) 3. Verify the valve is functioning correctly and replace if faulty 4. Inspect and clean or replace any clogged spray heads or filters <p><u>(Article no. KND506 7lit/min alt KND508 14lit/min)</u></p>
Temperature of Water is Too Hot or Too Cold	<ol style="list-style-type: none"> 1. No temperature control in the supply 2. Malfunctioning mixing valve 3. Fluctuations in the water supply temperature 	<ol style="list-style-type: none"> 1. Install a thermostatic mixing valve (tempering valve) to maintain a tepid water temperature 2. Inspect the mixing valves regularly to ensure they are functioning correctly 3. Check the main water heater or supply network to ensure temperature consistency
Water is Contaminated or Stagnant	<ol style="list-style-type: none"> 1. Lack of regular flushing 2. Poor water quality 	<ol style="list-style-type: none"> 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 2. Install filters to remove impurities

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 .