

# INSTRUCTION MANUAL

Emergency Equipment manufactured by Udyogi is warranted to function as per provided installation and maintenance instructions. The units should only be used for the purpose for which they were intended. This product is intended to supplement first-aid treatment. Due to widely varying conditions, Udyogi Plastics Pvt. Ltd. cannot guarantee that the use of this emergency equipment will prevent serious injury or the aggravation of existing or prior injuries.

OSHA - Udyogi Emergency Equipment enables you to meet the requirements in the (OSHA 29 CFR 1910.151) Rules and Regulations covering this type of equipment.

Udyogi Emergency Equipment is manufactured to meet IS 10592:2018, ANSI Z 358.1 Standards.

## General Points To Consider When Installing and Using Udyogi Emergency Equipment.

1. Units should be installed in close proximity to hazardous areas, clearly identified as eyewash stations or emergency showers or both, free from obstructions, and accessible from three directions.
2. To insure adequate operation of the units, all persons should be instructed in the proper use of both the shower and eyewash. Eyes should be rinsed at the scene of the accident for at least 15 minutes, and a doctor or industrial nurse should be contacted immediately.

Warning : Eye/Eye-Face wash fountains should not be used if it is known that eye contamination is metal or some other rigid solid fragment. In such an event both the victim's eyes should be gently immobilized in accordance with the current "Red Cross Standard First Aid Manual" and Medical Attention immediately sought.

Note : A job hazard analysis must be performed to make certain the equipment is accessible and operational as prescribed in the IS 10592:2018, ANSI Z 358.1 standard. A full job hazard analysis will allow you to determine what type(s) of emergency eyewash(es) and/or showers are needed, where and possibly in what quantity.

3. Showers and eyewashes should be connected to the main potable water supply, and a loose key lock- shield type stop or shut-off valve is recommended to allow proper maintenance of the unit. Valve must be labeled to prevent unauthorized shut-off.

4. Where ever possible, a filter/ Y-strainer may be provided upstream of eyewash fountain/shower inlet to remove particles from water and prevent additional eye damage.
5. All emergency showers and eyewashes should be tested weekly. A testing tag is attached to each manual and is used to record the date of the test and the initials of the tester.
6. Emergency eyewash, shower, and combination units are not a substitute for proper primary protective devices. As a defense against flying solid particles and splashing injurious liquids, workers should wear eye and face protectors and protective clothing.
7. One of the most important considerations when installing water bearing emergency equipment is assuring an adequate supply of water is available to the unit. Piping should be installed no smaller than the inlet size of the unit, and minimum 2 kg/cm<sup>2</sup> (196±10 kPa) or 30 psi flowing pressure should be available to the equipment. The ideal flowing pressure for shower or eyewash is between 2 kg/cm<sup>2</sup> or 30 psi.
8. Only products that meet IS / ANSI for emergency eyewash and shower equipment should be installed.

## **Specific Points To Consider When Installing And Using Udyogi Emergency Equipment**

1. These units should be located as close to the hazard as possible without physically causing a hazard itself, such as protruded fittings. Emergency showers and eyewashes shall be in accessible locations that require no more than 10 seconds to reach and should be within a travel distance no greater than 15 m (45 feet) from the hazard. However, the maximum time required to reach the shower or eyewash should be determined by the potential effect of the chemical. For example, exposure to a highly corrosive chemical might require showers to be installed within 3 to 6m (10 to 20 feet) from the hazard or eyewashes within 3m (10 feet) from the hazard. It is recommended that the consulting physician be contacted for advice on the proper distances. Precautions should also be taken to protect the user under frigid conditions, including provisions for the proper disposal of the water. Installation procedures should be in accordance with proper plumbing practices, with inlet pipe size for shower 32 mm (1¼") NB and for Eyewash 15 mm (½") NB.

### **I. Udyogi Eye & Face wash fountains**

1. If eye protection fails, continuous washing with plain water for 15 minutes

should be administered, or serious damage to the eyes may occur.

2. Eyewash fountains should be connected with piping no smaller than 15 mm ( $\frac{1}{2}$ " NB). All eyewash by 32 mm ( $1\frac{1}{4}$ " NB) pipe units should be attached to a drain by code approved method to facilitate ease of testing
3. Water pressure at the eyewash fountain should be no less than 2 kg/cm<sup>2</sup> during operation.
4. In areas where multiple eye injuries could occur simultaneously, more than one eyewash fountain is recommended.

## **II. Udyogi Emergency Showers**

Single head Emergency showers should be used in all areas where chemicals are being used or where clothing fires could occur.

1. Emergency showers should have a companion eyewash fountain located adjacently. If hazardous area is large, and there are many persons in the area, multiple installations are recommended.
2. Minimum pipe size to shower should be no smaller than  $1\frac{1}{4}$ " NB. Water pressure should be no less than 2 kg/cm<sup>2</sup> or 30 psi during operation. On showers located more than 50 feet from the main water supply, piping should be sized to provide friction losses no greater than 50 feet of  $1\frac{1}{2}$ " pipe.
3. A drain should be provided for the shower. Size of drain pipe 32 mm ( $1\frac{1}{4}$ " NB).
4. In case of chemical burn, the victim should shower immediately and doctor or nurse must be notified.

## **III. Udyogi Emergency Showers and Eyewash Combination unit**

Combination emergency showers and eyewashes are available as a complete emergency station. The emergency shower is available for use against chemical burns and clothing fires, and since an emergency shower should not be used as an eyewash fountain, an individually operated eye-wash is also available. These combination units provide both eyewash and an emergency shower with only one water connection.

1. A drain should be provided for the shower, and the eyewash should be connected to the drainage system.
2. Minimum pipe size to the combination unit should be no smaller than  $1\frac{1}{4}$ " NB. Water pressure should be no less than 2 kg/cm<sup>2</sup> during operation of both units. On units located more than 15 m from the main water supply, piping should be sized to provide friction losses no greater than 50 feet of  $1\frac{1}{2}$ " pipe.

# Installation, Maintenance & Operation Instructions

## DESCRIPTION

1. Floor mounted emergency shower and aerated eyewash combination unit - Shower is supplied with a 1" stay-open full flow ball valve, activated by a pull handle for opening and closing, is to be operated manually. Eyewash is supplied with ½" Stay-open full flow ball valve, activated by push plate.
2. Floor Mounted eye wash unit - Eyewash is operated by hand or foot pedal to deluge both eyes only.

## INSTALLATION

When assembling, use wrench to tighten connection joints. Be sure to use pipe sealant on all threaded connections. Review drawing to assure proper location of inlets, outlets, and accessories. For ease in assembly of the unit, numbered stickers are provided on each part which should be followed with reference to the drawings given at back page of each model.

The recommended method for assembling this unit is as follows:

1. Mount the bottom section with sticker numbered 1 to the floor using suitable anchors. Then assemble the middle section with sticker number 2 & 3 and then the top section with sticker number 4 & 5, (Use pipe sealant on all joints.)
2. Fix the eyewash bowl on the inlet tee, making sure to get the bowl as level as possible. (Eyewash bowl is identified by a sticker) Fix the eye wash pipe assembly.

Care to be taken while fixing ABS eye bowl for G.I model to avoid thread damage to ABS bowl.

3. Once bowl is positioned correctly on inlet tee, apply plumbers putty to drain pipe and tighten with hex tool.
4. Assemble pull rod and showerhead. (Marked by a sticker)
5. Once unit is completely assembled, connect a dedicated potable water supply to 1¼" inlet. The drain should be connected at the bottom as marked on the drawing. Failure to use potable water can result in emergency units producing impure or contaminated water, causing possible further injury. The drain or waste should be connected to an adequate drain in compliance with local plumbing codes.

6. Ensure that water entry, (marked) is securely connected with pipe sealant on the threads.

## OPERATION

The shower is activated by pulling the triangular handle which will continue to discharge water until the valve is manually closed, by pushing the handle up.

The eyewash is activated by pushing the push plate back from initial 90° position. The floor mounted eyewash is to be operated by hand / foot paddle. Closing of the valves for both eye wash has to be done manually in compliance with standard.

## TESTING PROGRAM

All safety emergency equipment shall be activated on a weekly basis to flush the line and verify proper operation. We furnish a testing record tag with each unit enclosed in manual. On this tag the date of inspection and the inspector's initials should be noted.

TEST	INTERVAL	TO CHECK	WHO	REASON
Functional Test	During installation and Weekly - For 10 to 15 seconds.	Proper opening and closing of valve. Correct operation of safety shower & eye wash Fountain. Leakage.	End user	Protection against contamination from stagnant water (regular change of the standing water). To reduce microbial contamination. After change of parts if any. Ensuring the immediate readiness for operation of the equipment.
Extensive Test -	Annual	Rusting or deposits inside of pipe, inlet & outlet Signage installation. Changes of parts required if any. Shower & eye wash fountain in simultaneous operation and alignment.	Competent person	Leaks, contamination such as dust or calcium/iron deposits, signage, temperature of water (e.g. heating of water from the sun or freezing) and flow. Ensuring the continuous readiness for operation of the shower.

## MAINTENANCE

The valve and the eyewash are the only portion of the unit that may require maintenance. Should you need parts to repair this unit, please contact us directly.

Before any maintenance is done be sure to shut the water supply off.

In the event of contamination or calcium deposits the emergency shower 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.

## TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	POSSIBLE SOLUTION
<b>DURING INSTALLATION</b>	<b>DURING INSTALLATION</b>	<b>DURING INSTALLATION</b>
Insufficient water discharge	Water pressure is too low or/and pipe diameter of the supply pipe is too small.	Check the pipe line to make sure that the pipe size is adequate for the required flow rate and available water pressure is min 2 kg/cm <sup>2</sup> .
<b>DURING OPERATION</b>	<b>DURING OPERATION</b>	<b>DURING OPERATION</b>
Insufficient water discharge	Blockage in supply pipe. Deposits blocking the flow of water.	Check/clean storage tank & pipe line to clear scales & deposits.
Water drips out of the shower continuously.	Incomplete valve closure.	Check the valve stopper for damage and ensure that the valve is pressed back into a completely closed position. Open the cover nut, push plate /valve lever & loosen the base nut. Adjust the valve stem into close position .Tighten the base nut. Fit the push plate/ valve lever and cover nut as per drawing.
	The valve seal is damaged.	Change the valve.

## WARNING

Use only genuine Udyogi parts when repairing or replacing components.

**NOTE: THIS UNIT SHOULD BE CONNECTED TO 1¼" NB PIPELINE HAVING UNINTERRUPTED SOURCE OF POTABLE WATER, WITH A MINIMUM FLOWING PRESSURE OF 2 kg/cm<sup>2</sup> (196 kPa).**

IS 10592:2018



Licence No. : CM/L 522245

Note : All units meet existing  
ANSI Z 358.1  
Standard

## DISCLAIMER

Product improvements may cause specification and dimensional changes without notice.



6220 GI ▶



6220 SS ▶





6250 GI ▶



6250 SS ▶



◀ 4220 GI



4220 SS ▶



◀ 4710 GI



4710 SS ▶



4810 GI ▶









