

Instructions for Installation, Use and Maintenance FSI Safety Tank Shower Systems

per DIN 12 899 T1-3 and ANSI Z 358-2004



Table of Contents for Instructions for Use

Section

- 1 Manufacturer, Safety Shower Technical Data and Safety Precautions
- 2 Storage and Transport
- 3 Installing the Safety Shower
- 4 Initial Start-up
- 5 Using the Safety Shower
- 6 Inspections / Malfunctions
- 7 Disposal
- 8 Replacement Parts
- 9 EC declaration of Conformity

FSI

311 Abbe Rd
Sheffield Lake, Ohio 44054
Phone: 440-949-2400
Fax: 440-949-2900
Email: sales@fsinorth.com
Visit us on the web at www.fsinorth.com

1.2 Designation and Intended Purpose

Safety shower system in accordance with DIN 12 899T1-3 and ANSI Z 358-2004 for rinsing and decontaminating persons in the event of an emergency. Suitable for use in regions subject to frost, if a heater (optional) has been attached.

1.3 Design

Frame: stainless steel square tubing
 Water tank: stainless steel sheet metal
 Insulation: rigid polyurethane foam in accordance with DIN 4102, material class B2, standard flammability
 Piping / valves: stainless steel / plastic.

1.4 General Technical Data

Model:	Pipe material:	Body shower flow rate:	Flow rate at spiral tube: (optional):	Eye shower flow rate (optional):	Water inlet:	Duration of use in minutes if not connected to a permanent water supply line:
	stainless steel	75 l/min.	5 l/min.	12 l/min.	1¼" AG	
1001001	x	x	x	x	x	~ 5
1001002	x	x	x	x	x	~ 15
1001003	x	x	x	x	x	~ 25
1001004	x	x	x	x	x	~ 11

1.5 Accessories / Options for Safety Showers

Safety shower systems can be ordered with options (accessories). If any of the below listed options have been ordered, please refer to separately furnished, supplementary instructions for installation, use and maintenance.

- 160 0x02: position lamp
- 160 0x15: area illumination
- 160 0x05 / 06: switch for emergency alarm
- 160 0108 / 09: alarm horn
- 160 0x11 / 10: immersion bath heater

1.6 Guarantee

Our liability for defective equipment is specified in our terms and conditions of delivery. We assume no liability for damages resulting from nonobservance of the instructions for use and maintenance, or from nonobservance of the specified conditions of use. Only products which are free of defects, and which demonstrate the characteristics specified by ourselves, are permitted to leave our factory. Proper functioning is thus assured if the instructions for use and maintenance are carefully observed.

1.7 Safety

These instructions for use and maintenance contain essential information which must be observed during use, maintenance and repair. These instructions for use and maintenance must therefore be read by trained personnel before the safety shower is placed into service, and a work directive must be prepared by the operating company which makes reference to these instructions for use, as well as local and company-

specific circumstances, and trained personnel must be accordingly instructed before working on or with the safety shower.

The safety precautions included in these instructions for use, nonobservance of which may be hazardous for human beings and the environment, are identified with the general warning symbol in accordance with accident prevention regulation BGV A 8:



or with the following symbol for warnings regarding electrical voltage.



The word **Caution** is added to safety precautions whose nonobservance may be hazardous for the respective technical equipment and its functions. It is absolutely essential to observe all instructions which are attached directly to the safety shower systems, and to keep them in readily legible condition.

1.8 Hazards Resulting from Nonobservance of Safety Precautions



Nonobservance of safety precautions may be hazardous to human beings, as well as the respective technical equipment. Nonobservance of safety precautions may render the guarantee null and void, and may bar any possible claims for damage.

All safety precautions listed in these instructions for use and maintenance, all applicable legal regulations and accident prevention regulations, and the work directive and safety precautions issued by the operating company must be observed.

Safety Precautions for the Operating Company

- Technical safety equipment must be kept in an operationally reliable condition.
- The functional reliability of the power supply for the frost guard may not be impaired.
- Safety shower systems must be installed such that the user has direct access to the shower.

Safety Precautions for Maintenance, Inspection and Installation Work

The operating company must assure that all maintenance and installation work is executed by authorised, qualified, trained personnel.



Work may only be performed on the electrical system (if included) by trained electricians after it has been disconnected from all sources of electrical power – see also the applicable accident prevention regulation, VDE regulations and

Regulations issued by your local power utility (only applies to safety shower systems equipped with electrical accessories).

Impermissible Modes of Operation

The technical safety equipment integrated into FSI Safety Shower Systems. e.g. heater, alarm switch illumination, actuating mechanism etc., must always be kept in good working order.



It is impermissible for the operating company to neglect any of its respective legal responsibilities.

For example:

- Non-issuance of the required work directive
- Neglecting to prepare a hazard analysis
- Nonobservance of specified maintenance work, inspection work and periodic testing
- Neglecting to provide personnel with required instruction for proper use of the safety shower system, which must be held at least once a year

1.9 Range of Applications

FSI safety shower systems are intended for rinsing and decontaminating persons.

2 Storage and Transport

The safety shower systems must be stored and transported to the installation site in the supplied transport packaging (carton and Pallet) under dry, frost-free conditions.

Note: Improper handling results in increased danger of tipping!

3 Installation

3.1 Requirements for the Installation Site

Subfloors must be level, and must be capable of withstanding the weight of the safety showers after installation and filling.

Beyond this, the installation site must be arranged such that the safety shower:

- Cannot be damaged by vehicles
- Allows for unobstructed access by users at all times
- Is located less than 30 metres from areas of potential danger and can be accessed within 10 seconds.
A distance of 3 to 6 metres is recommended in the case of highly caustic substances.
- The area around the shower should be well illuminated, and the shower itself should be identified with highly visible signs.

3.2 Installation



The water inlet is equipped with a 1¼" IG connector. We recommend connecting the shower to the water supply using a pipe with a nominal diameter of 1½". Water pressure should have a value of to 2 to 8 bar. The water line to the safety shower system should be equipped with a stop cock in close proximity to the system for maintenance and repair work, which is secured against unauthorised access.



If the safety tank shower is not connected to a permanent water supply line, the specified durations of use for the various models must be observed (see section 1.4).

Safety tank showers must be securely screwed to the subfloor by means of the base plates. Which type of fasteners are required must be determined at the installation site by installation personnel in accordance with local conditions.

3.2.1 Models with Optional Catch Basin

Catch basins are integrated into the frame construction of the safety tank showers.

The water outlet is equipped with a 2" AG drain pipe. Water disposal fixtures required for further transport of waste water must be clarified at the installation site.

As a result of the shower's design, splash water will also fall outside of the catch basin, especially in consideration of the fact that the user causes additional dispersion. If the possibility exists that this may result in danger, please make use of our side and rear panel facings, as well as our PVC strip curtains.

3.2.2 Models with Optional Platform Actuation

The actuating chain used for platform actuation is cut to length at the factory. During setup at the installation site, it must be assured that the actuating chain opens the valve all the way when the platform is subjected to full loading, but it must also have a small amount of remaining free play. If there is no free play, for example due to an out-of-level foundation, the chain must be lengthened because the shower valve will otherwise be damaged.

The return spring is also preset at the factory. During setup at the installation site, it must be assured that the spring holds the platform up, and that the actuating chain to the valve is not subjected to any load.

Caution

Any possibility of consequential damages resulting from water discharged during use of the safety shower system must be ruled out. If applicable, discharged water must be reliably diverted by means of fairings and catch basins.

4 Initial Start-Up

After installation, water should be allowed to run through the body shower and the eye shower (if included), until it is clean and free of contamination. The jet regulators must be removed from the eye shower to this end. The jet regulators must then be replaced.

5 Use

5.1 Body Showers with Push Bar (panic bar)

Push the handle all the way down to the valve lever limit stop.

After the shower has started:

Remove all contaminated clothing which is not stuck to your skin, and rinse all affected areas with cool, clean water.

In order to stop the shower, push the maintenance lever up, which is located outside of the shower to the right, until the valve is closed.

Seek medical attention!

5.2 Body Shower with Push Bar (panic bar) and Tread Platform (article numbers 160 1086 / 87)

Step onto the platform and grasp the push bar. The push bar pulls the actuating chain down.



After the shower has started:

Remove all contaminated clothing which is not stuck to your skin, and rinse all effected areas with cool, clean water.

In order to stop the shower, push the maintenance lever up, which is located outside of the shower to the right, until the valve is closed.

Seek medical attention!

5.3 Models with Optional Eye Shower (article numbers 1601001 / 1602001 / 1602002)

5.3.1 Eye Shower, Article Number 1602001

Rotate the actuating lever a quarter turn in order to start the eye shower. After doing so, the dust cover drops from the shower as a result of the first surge of water.

The eye shower should not make direct contact with the contaminated eye or any surrounding areas. Ideal rinsing is assured at a distance of approximately 15 cm.

In order to stop the shower, push the lever up until the valve is closed.

Seek medical attention!

5.3.2 Eye Shower, Article Number 1602002

The eye shower is started by pulling the triangular actuating bar.

The eye shower should not make direct contact with the contaminated eye or any surrounding areas. Ideal rinsing is assured at a distance of approximately 15 cm. Spiral tubing allows the user to rinse other body parts, or to assist injured persons lying on the floor.

In order to stop the shower, push the lever up until the valve is closed.

Seek medical attention!

5.3.3 Eye Shower, Article Number 1601001

The eye shower is started by pulling the cover towards the user. The shower valve is opened by means of the cover.

The eye shower should not make direct contact with the contaminated eye or any surrounding areas. Ideal rinsing is assured at a distance of approximately 15 cm.

In order to stop the shower, push the cover up until the valve is closed.

Seek medical attention!

5.3.3 Eye Shower, Article Number 1601001, with Optional Foot Lever Actuation (art. no. 1601090)

The eye shower is started by pulling the cover towards the user, or by stepping on the foot lever. The shower valve is opened by means of the cover.

The eye shower should not make direct contact with the contaminated eye or any surrounding areas. Ideal rinsing is assured at a distance of approximately 15 cm.

In order to stop the shower, push the cover up until the valve is closed.

Seek medical attention!

5.3.4 Models with Optional Heater

A maximum water temperature of approximately +20°C is preset at the factory. The temperature can be conveniently checked with the thermometer (optional) on the bottom right-hand edge at the front of the tank. This temperature may be fallen short of, depending upon local conditions at the installation site (wind-chill factor etc.). The heaters are equipped with a regulator, by means of which the temperature can be adjusted if required (see details in separately enclosed instructions for use).

Caution



311 Abbe Rd
Sheffield Lake, Ohio 44054
Phone: 440-949-2400
Fax: 440-949-2900
Email: sales@fsinorth.com
Visit us on the web at www.fsinorth.com

However, it is not advisable to set the temperature higher than +20°C, because this promotes bacterial growth.

6 Inspections / Malfunctions

The safety shower system must be inspected for externally visible damage and defects after installation, before initial start-up and at the intervals listed below, as well as after modifications or repairs.

6.1 Weekly Inspection

- Test the body and eye shower actuation mechanisms.
- Platforms and foot levers: check for unrestricted movement, inspect springs and chains for damage
- Visual inspection of the entire system for damage

6.2 Semi-Annual Inspection

Maintenance and inspection executed by a commissioned, certified person.

6.3 Annual Inspection

Maintenance, inspection and cleaning of the water tank by a commissioned, certified person

6.4 Water Quality

According to DIN, water quality comparable to that of drinking water is required for the shower. Proper water quality must be assured at the location site, and water must be replaced frequently. If the recommended water additive is used (article no. 160 0007), bacterial infection can be prevented for up to 6 months . If a heater has been installed it is not advisable to set the temperature higher than +20°C, because this promotes bacterial growth.

6.5 Malfunctions

Malfunction	Possible Cause	Possible Remedy
The volume of water which flows from the shower does not appear to be adequate.	Clogged shower head	Clean
The volume of water which flows from the eye shower does not appear to be adequate.	Water pressure is too low, supply line cross-section is too small or the jet regulator is contaminated.	Unscrew the jet regulator and clean the low pressure diffuser.
Water drips continuously from the shower.	The valve does not close correctly.	Inspect the valve limit-stop for damage and make sure that the valve is fully returned to the closed position.
Water drips continuously from the shower.	The valve seal is damaged.	Replace the valve.
The body and eye showers are not stopped automatically after use.	This is not a malfunction. This is required by DIN.	This is not a malfunction. This is required by DIN.

7 Disposal

The shower system can be completely dismantled. The individual materials, i.e. metal, insulation, electrical components etc., can be separated and disposed of at a recycling centre. National and local disposal regulations must be adhered to.



8 Replacement Parts and Accessories

You will be provided with a replacement parts list upon request.

9 EC Declaration of Conformity

See attachment (only required if the safety shower system has been ordered with electrically powered options)

All rights reserved. Duplication, in part or in whole, is forbidden. No portion of this documentation may be reproduced in any form whatsoever (photocopy, microfilm or any other process), nor may it be edited, duplicated or distributed with the help of electronic systems, not even for training purposes, without previous written consent from FSI North America.

All specified dimensions are approximate.

Subject to change without notice. Misprints excepted.



311 Abbe Rd
Sheffield Lake, Ohio 44054
Phone: 440-949-2400
Fax: 440-949-2900
Email: sales@fsinorth.com
Visit us on the web at www.fsinorth.com