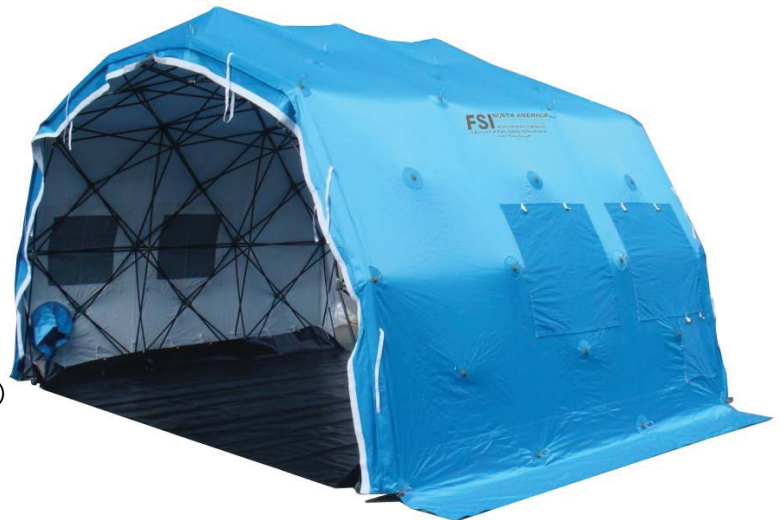




**FSI** **NORTH AMERICA**®  
**SAFETY THROUGH TECHNOLOGY**  
**A Division of Fire Safety International**  
**[www.fsinorth.com](http://www.fsinorth.com)**

**INSTRUCTION MANUAL**

**FSI® DAT® SERIES SHELTERS/SHOWERS &  
“QE SERIES”® SHELTERS**



**ALL FSI® DAT® & “QE SERIES”®  
SHOWERS ARE ANSI # 113  
COMPLIANT**

5/19/16



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## INTRODUCTION

Thank you for buying the FSI DAT® series portable inflatable shelter/shower unit. They have been designed for rapid deployment and ease of use in emergency hazmat incidents, offering a top quality multi use compact inflatable structure. FSI shelters can be used with multiple optional items available from FSI including air and water heating and cooling systems, elevation grids, bladder tanks, waste pumps, air filtration units, etc. They provide reliable operation in demanding conditions and situations if used and maintained correctly.

### Important Notes

This operation manual should be thoroughly and completely studied and understood prior to initial use of the unit.

If this is your first air inflatable FSI Shelter or Decon Shower, for your own comfort and safety, please ensure that you obtain handling and operation experience before assuming command of the unit. Your FSI authorized distributor will be pleased to advise you with competent instruction.

**PLEASE KEEP THIS MANUAL IN A SECURE PLACE AND KEEP IT WITH THE UNIT PERMANENTLY.**

If there are any questions or concerns, please contact FSI prior to operation.

Please note that we cannot be held responsible for any damage and/or equipment malfunction, which may result from lack of reviewing and following instruction manual instructions, and/or from lack /absence of proper care and maintenance.

FSI operates a policy of continual product development, and as such both the product and this manual may be subject to technical alterations without notice.

This manual should be made available to the operating personnel for reference purposes in the event of an operating/technical query.

On scene coordinators are responsible at all times for the correct and proper use, movement, carry/lift weight per person, cleaning & use in various dangerous environments. FSI® merely supplies set-up, care, use & maintenance guidelines.

This is an air structure that gets its form, strength and stability by means of inflation with air. The tent is designed as a temporary shower/shelter for multi purpose uses.



**ATTENTION: This warning symbol appears in the operating manual next to operating and safety instructions dealing with rules, regulations and instructions for the proper operation of the FSI® unit.**

# SAFETY INSTRUCTIONS



This operation manual should be reviewed and thoroughly understood prior use of the unit.



FSI showers/shelters require a compressed air/electric inflator/deflator source to inflate them. Operators should be familiar with the use of the air source utilized, and aware of any risks associated with it.



The weight of the FSI units varies dependent on the model purchased. The units are supplied in a carry sleeve/bag fitted with handles to permit two or more people to carry the unit. The carry sleeve/bag is not to be dragged-but lifted and carried by the number of personnel on-sight coordinators deem appropriate.



When used in a hazmat incident, FSI units may come in contact with substances 'hazardous to health'. Should this happen, they should be thoroughly cleaned to prevent contamination of personnel. Operators should be aware of this risk, and wear appropriate personal protection to avoid coming in contact with these substances. On scene coordinators must manage and be completely responsible herein.

**ATTENTION:** FSI Showers/Shelters (as of 09/01/02) are fitted with an overpressure valve on the inflatable structure, to prevent the unit from over-inflating and possibly bursting. This valve is fully automatic in operation, and must not be blocked or adjusted in any way. If using compressed air to inflate unit, an operator must stand by at all times and immediately turn off compressed air source when the overpressure valve is activated as noted by the "hissing" sound of escaping air.



ATTENTION:

## TEMPERATURE USE GUIDELINES

Hot air expands and cold air compresses and so the weather impacts the air berms of your DAT series product in use.



### COLD WEATHER USE:

Recommended for use in temperatures to -30 degrees C (-22 degrees F)

Fully inflate to the point of the over pressure valve almost being activated (if activated cease air fill immediately) if being used in extreme cold weather since the cold air will actually contract inside the berms and the air berms may feel slightly 'soft' to the touch.

### WARM WEATHER USE:

Recommended for use in temperatures to +40 C (+104 F)

When temperatures during use are to exceed 30 degrees C (86 F) be aware hot air expands and so manually reduce the air pressure in the air berms or allow over pressure valves to activate. As the evening shift arrives in continued use, and air temperature drops re-inflate the unit as colder air causes internal air pressure to decrease.

**AT THE COMMENCEMENT OF EACH SHIFT FSI STRONGLY ENCOURAGES AND RECOMMENDS THAT THE AIR PRESSURE INTERNALLY BE CHECKED AND ADDRESSED AS ABOVE, AND THAT A COMPLETE SYSTEMS CHECK OCCUR ON ALL ITEMS IN USE WITH THE DAT SERIES SHOWER OR SHELTER SYSTEM.**

ATTENTION: **When removing FSI showers/shelters from the carry sleeve/bag, ensure there are no sharp objects or glass on the floor that might tear or puncture the inflatable structure. Avoid dragging the unit over rough surfaces. The use of a tarp/groundsheet is strongly recommended for inexpensive protection and maximum longevity of the floor and berms.**



# UNPACKING FSI® SHOWERS/SHELTERS

To unpack FSI shower/shelter and make ready for inflation



Undo carry bag/sleeve, roll bag/sleeve upside down, and remove unit.

Ensure surface is flat and free of sharp objects, place groundsheet on ground (if supplied as an option), then unroll FSI unit either onto groundsheet or onto ground **carefully**.



**NOTE! Do not drag on ground!**



Place FSI unit to suit all site and incident requirements, ensuring entry/exit doors are aligned in right direction. On-scene coordinator must make these decisions.

## INFLATING FSI® SHOWERS/SHELTERS FOR USE



Follow all instructions located above the fill valves on every unit **EXACTLY**.

**If using an SCBA cylinder and the supplied black color high pressure fill hose with locking clip and fitting please review those instructions carefully and follow them exactly.**



Follow all instructions located above the fill valves on every unit **EXACTLY**.

If using the supplied inflator deflator use in the manner as shown herein following all instructions located on the berms of the unit.

Allow a steady, clean flow of air to inflate the unit. It will take approx. 45 seconds to 5+ minutes to inflate the unit (size of unit dependent) from an SCBA cylinder, and slightly longer if using a compressor or the electric inflator/ deflator. Remove inflator / deflator once unit is fully inflated.

**NOTE!** Support roof of FSI shelter as it inflates! (help unit stand)

# INFLATION USING HIGH PRESSURE COMPRESSED AIR:



With on-scene coordinator oversight, carefully attach hose to scba/dive air cylinder and lock hose to air berm D ring using supplied locking clip. Then turn on cylinder air VERY slowly. Then inflate unit until overpressure valve operates - indicated by sound of escaping air, which can be felt by hand. **IMMEDIATELY** turn off compressed air supply. The overpressure valve will close automatically when excess air has escaped from unit.

**NOTE! Never cover/block the overpressure valve, as the unit may burst!**

## Make the following final checks:



Check that the unit is upright, and not leaking. If a leak is discovered, deflate unit and repair before using. (See instructions for notes on how to repair punctures.)



In the event of/in case of windy conditions, always tie off unit to the ground using supplied tie down ropes and stakes, and/or lash to solid objects (e.g., vehicles).

## OPERATING FSI UNIT - WATER INLET PRESSURE GUIDELINES



**FSI Shower systems have all been designed to handle a maximum incoming water pressure of approx. 55 psi (3.6 Bar). If the water pressure coming into the FSI shower unit is unknown or will exceed 55 psi – FSI requires the use of a water pressure reducer – available from FSI.**

### **\*\* INLET WATER PRESSURES in FSI Decon Shower Systems:**



**Each and every section of spray nozzle heads and multiple function trigger guns is equipped with a shut off valve and a quick disconnect feature. If you find the inlet water pressure is not capable of feeding all water outlets with sufficient water pressure to provide a proper shower – then shut off all shower heads not currently being used . This will best ensure maximum water pressure is available where it is needed.**

FSI® DAT® AND DAT® ‘QE SERIES’® DECON SHOWERS ARE ANSI 113 COMPLIANT.

FSI units have been designed for use by personnel with some knowledge or training in decontamination procedures. On-scene coordinators must always determine correct use. Proceed as follows:

Unzip doors at the entrance to the unit. The entrance is the location nearest to the inflation/overpressure valves but as determined by on-scene coordinator.

At night, the relatively transparent construction and reflective striping above the doors and on the berms of the FSI unit will allow light from external sources to illuminate the interior and clearly show the entry and exit points.

## STOWING FSI® SHOWER/SHELTERS

### If using Accessories such as air/water heaters/ decon showers



Disconnect and remove all showers, heating , air cooling units and so forth from inside the shelter or in close proximity to.

Wipe up any residual water inside the unit, and make sure interior is completely dry.



To deflate unit, make sure the entrance and exit doors are unzipped and rolled up.

Ideally with one person or more at each end of FSI shelter, open the dump valve.



The FSI shelter will rapidly deflate (within 1 minute or so). As the unit collapses, each person should pull inwards on the end pillars, so the roof collapses neatly on top of the lower part of the unit

Fold the shelter in three or more sections starting at the end furthest from the dump valve.

This will further squeeze air from the unit.

HINT: It is best to use the supplied electric/inflator/deflator to fully remove air from the unit, but not essential.



Place the carry bag/sleeve over the top of the folded unit, then roll the unit over so the bag/sleeve is now the right side up.

Loosen bag straps, clip in place and pull straps tight. The FSI unit is now ready for transport and storage.

## DIS-ASSEMBLY /STORAGE/MAINTENANCE/CLEANING MAINTENANCE:

All equipment should be stored dry, with no water left in/on the unit. It is important to dry off the unit completely before final packing into the carry bag/sleeve. This may not be feasible immediately after use, and might be better done back at base.

While all canopy fabrics have been heavily impregnated with mildew resistant antibacterial agents that meet and exceed US Fed. Test MIL.STD.810E 508 please note that storing fabric shelters/showers 'wet' with either water and/or detergent residue on the canopies may result in the growth of surface mold and an accompanying mold odor on the surface of the canopies. The canopies themselves will not rot or mildew, but the growth of surface mildew/mold in/on the residue is a given if stored 'wet'.

- Before storage, check that all parts are present, and replace any missing items at the earliest opportunity.
- Inflate at regular intervals to allow air through the unit, and to check there are no leaks in the structure.
- Should a minor leak or rip be discovered - repair it using the repair kit provided, or return to FSI® if significant damage has offered. Instructions on undertaking minor repairs are shown in section 10 of the manual.
- For major repairs, contact either FSI® or your local Agent / Representative. It is possible the entire unit may need to be returned to FSI®. On reporting the nature of the damage, we will be able to advise the best course of action.
- After checking, ensure FSI® shelter is dry before repacking and storing.

## DIS-ASSEMBLY:

- Remove all loose items such as equipment and furniture and thoroughly clean the floor.
- Remove all stakes and fittings and accessories.
- Push and turn the center valve core 1/4 clockwise. The air will come out automatically.
- Deflate
- Depress the tubing manually to remove remaining air.

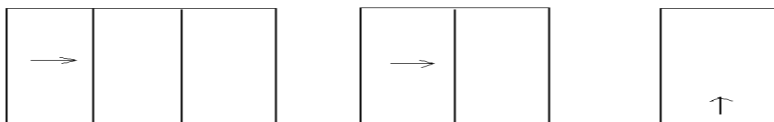
## Folding:

The object is to observe the folding sequence to ensure unit can be returned to the carry bag/sleeve.

Ensure all air has been evacuated from frame.

Close the valve.

Fold as below.



Roll from end.

Put it in bag/sleeve  
and fasten it.



## **Storage:**

Allow your air tent to dry thoroughly in the shade before storing, never in bright sunlight. Store your air tent in a cool, flat and dry place with some air in the air chambers if at all possible. If not, empty the air tent of air completely and roll it up loosely, not tightly as this may damage the seams.

## **Cleaning:**

The surface of the air tent should be cleaned with a solution of mild soap and fresh water after each use. To avoid abrasion and wear, be sure that all the sand, small rocks, oil and dirt have been flushed away from the air tent surfaces, and particularly the inside floor next to the tubes.



**\*\* WARNING: NEVER USE PETROL OR SOLVENT FOR CLEANING**

## **Maintenance:**

Clean your unit with just fresh water and normal soap.

To get your air berms looking 'like new' apply wax for artificial leather/or use Armor All type products and apply to the unit with a dry, clean cloth.

When you store the unit for a long time without use, we would recommend you inflate it monthly and check if it all is as originally left.

## **TROUBLESHOOTING / REPAIRS**

Your FSI shower/shelter should provide a long and trouble free operational life span. It has been designed such that no spares need be kept other than consumable items and accessories you may elect to purchase. However, under certain circumstances the potential exists for faults to occur; and their identification and possible rectification are as listed below:

### **INFLATABLE BERM LEAKS:**

Identified by the FSI unit collapsing with time. A "hissing" sound might be heard if leak is severe.