



GLOBAL  
FINISHING  
SOLUTIONS



# Hazardous Material Storage Building (HMSB)

## Owner's Manual

**Document Number:** 239-076 rev 4

Publication date 12/20/2021

*Read and keep this manual for future reference. All personnel operating the equipment described in this manual should review and understand all instructions before use.*

# Table of Contents

Introduction .....	3
About Global Finishing Solutions LLC .....	3
Contacting Global Finishing Solutions .....	3
Target audience .....	3
Conventions used in this manual .....	4
Safety notices .....	4
Information notices .....	4
General safety .....	5
HMSB safety .....	7
HMSB description .....	8
Preparing for installation .....	9
Accepting delivery of your HMSB .....	9
Gathering required documentation .....	10
Confirming site requirements .....	11
About the Design Drawings document .....	12
Page elements .....	12
Page types .....	14
Required materials .....	15
Installation procedure .....	16
Building location .....	16
Unload the building .....	16
Install the building grounding equipment .....	17
<i>If applicable:</i> Install the explosion control method .....	17
Install the explosion (deflagration) relief panels .....	18
Install the explosion (deflagration) prevention system .....	18
Fire protection systems .....	19
Dry chemical systems .....	19
Sprinkler systems .....	19
Maintenance procedures .....	20
Maintenance schedule .....	20

# Introduction

## About Global Finishing Solutions LLC

### Leading the Industry in Paint Booth and Finishing System Technology

With decades of experience, Global Finishing Solutions is the leading manufacturer of paint booths and finishing systems for many industries, including automotive refinish, aerospace and defense, industrial manufacturing, woodworking, and large equipment. By combining high-quality components, strong relationships with paint manufacturers, and our experienced distribution network, GFS provides the best equipment and support to set your business up for success.

## Contacting Global Finishing Solutions

### General information

- Toll-free: 800-848-8738
- Fax: 715-597-2193
- Email: [info@globalfinishing.com](mailto:info@globalfinishing.com)
- Online: [www.globalfinishing.com](http://www.globalfinishing.com)

### Technical support

- Toll-free: 800-848-8738
- Fax: 715-597-8818
- Email: [techservices@globalfinishing.com](mailto:techservices@globalfinishing.com)

### Parts and filters

- Toll-free: 800-848-8738
- Fax: 888-338-4584
- Email: [parts@globalfinishing.com](mailto:parts@globalfinishing.com)

## Target audience

This document is intended for use by trained, experienced equipment installers and maintenance technicians. If you have questions about the installation procedure described in this manual, contact GFS as described above.

## Conventions used in this manual

This section describes how information is presented, organized, and referenced within this manual.

### Safety notices

This manual uses the following standards to identify conditions related to safety hazards and equipment damage.

**Table 1. Safety notices**

Symbol	Description
<b>DANGER</b>	Indicates an imminent hazard that will result in death.
<b>WARNING</b>	Indicates a hazard that can result in serious personal injury or death.
<b>CAUTION</b>	Indicates a hazard that can result in personal injury.
<b>NOTICE</b>	Indicates a situation that can result in equipment or property damage, but poses no risk of personal injury.

### Information notices

In addition to the safety notices described above, this manual uses a boldface keyword to identify certain other types of information.

**Table 2. Information notices**

Keyword	Description
<b>NOTE</b>	Denotes general information that provides additional context or guidance.
<b>Important</b>	Denotes information to which you should pay special attention.
<b>Reference</b>	Directs you to related content in a separate document.
<b>Prerequisites</b>	Specifies other tasks that must be completed or conditions that must exist before you perform the current task.
<b>Scope</b>	Describes limitations to the current task or conditions under which the task applies or does not apply to the procedure.

# General safety

Follow all safety guidelines when assembling, operating, or servicing this product.

## **WARNING**

There are inherent hazards associated with the operation and service of this equipment. For your personal safety, observe all safety information. Failure to observe these safety practices can result in personal injury or death.

## **WARNING**

Operation and maintenance of this product must be performed properly by qualified personnel who observe the warnings in all documentation and notes provided with and on the product.

## **WARNING**

Follow all general standards for installation and safety for work on installations. Follow all good practices for the proper use of lifting tackle and equipment. The use of protective equipment such as safety goggles and protective footwear must be considered.

## **WARNING**

All persons who will operate, service, inspect, or otherwise handle this product must read and understand the safe operating practices, safety precautions, and warning messages in this documentation.

## **WARNING**

The roofs of GFS equipment are not designed or intended to be walked upon or to support weight of any kind. As designed and manufactured, equipment roofs do not meet the minimum requirements of a safe walking and/or working surface under OSHA 1910.22. Under no circumstances should the roof be used by maintenance personnel or others for walking, standing, or storage of any kind. When necessary, roof access should be secured through the use of a properly supported platform that satisfies the minimum load requirements specified by ASCE 7 (Minimum Design Loads and Associated Criteria for Buildings and Other Structures) and ASCE 37 (Design Loads on Structures during Construction). Additionally, personnel should always utilize appropriate fall safety protocols when using an elevated platform. Use of the roof in a contrary manner may result in injury and/or death.

## **WARNING**

Comply with OSHA guidelines and with all applicable local electrical, safety, and fire codes and standards.

## **WARNING**

All field wiring provided must comply with local codes or, in the absence of local codes, the National Electrical Code (NFPA 70).

## **WARNING**

Electrical installation should be completed by a qualified electrician. Installation must meet all applicable national, state, and local electrical codes.

## **WARNING**

Ensure that all electrical components are grounded to a central ground.

**WARNING**

Disconnect and lock out the main electrical service before installing, adjusting, or servicing the product.

**WARNING**

Guards and covers that prevent contact with electrically energized or moving parts are required and must not be removed or left open during operation.

**CAUTION**

Read and save these instructions before attempting to install, operate, or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage. Retain these instructions for future reference.

**CAUTION**

This manual contains statements that relate to worker safety. Read this manual thoroughly and comply as directed. Operate this equipment in accordance with the guidelines set forth in this manual. It is impossible to list all potential hazards of this equipment. Instruct all personnel involved with this equipment in the safe conduct and operation of the system. GFS recommends that only qualified personnel operate and maintain this equipment.

**CAUTION**

Safety signs, panels, and labels that are normally affixed to the product must be replaced immediately if illegible or missing.

**CAUTION**

New or replacement parts that are installed during repair or maintenance must include all safety signs, panels, and labels as specified by the manufacturer. These must be affixed to the new or replacement parts as specified by the manufacturer.

**CAUTION**

Where applicable, use earplugs or take other safety measures for hearing protection.

**NOTICE**

The product must be installed and serviced only by a trained, qualified service technician. Incorrect installation may void the warranty.

**NOTICE**

If you have questions about the warranty, please contact your distributor prior to contacting GFS.

# HMSB safety

## **DANGER**

**Ceiling panel load capacity for installation and maintenance:** You must use temporary platforms that span at least two structural frames for maintenance. **Do not walk on or apply any pressure to lights or explosion (deflagration) relief panels.**

## **WARNING**

All equipment must be operated and maintained in accordance with local, state, and federal (OSHA) requirements governing occupational safety, fire protection, and Hazardous Material Storage Building operations. Operators must read and understand GFS and included independent equipment and/or component manufacturer's instructions prior to use. **Disclaimer:** GFS is not responsible for any injury, illness, or property damage that results from not abiding by local, state, or federal (OSHA) requirements that govern occupational safety, fire protection, and Hazardous Material Storage Building operations. GFS is also not responsible for any injury, illness, or property damage that is the result of not adhering to GFS and/or independent equipment/component operating, service, maintenance, and/or installation requirement's or directives.

## **WARNING**

Install the Hazardous Material Storage Building in compliance with locally enforced codes and standards.

## **WARNING**

Duct the exhaust air from the fan away from the working environment to the outdoors. Do not operate the Hazardous Material Storage Building unless exhaust has been ducted properly.

## **WARNING**

Isolate the outdoor vent from air-conditioning intakes, windows, and any other equipment that may recirculate the exhaust indoors.

## **WARNING**

Ensure that the exhaust fan is operating correctly before entering the HMSB.

## **CAUTION**

Become familiar with all controls before operating or servicing this Hazardous Material Storage Building.

## **CAUTION**

If this installation includes pumps or compressors, install and connect those devices in accordance with the manufacturer's documentation.

## **NOTICE**

Failure to anchor the Hazardous Material Storage Building structure to the floor properly may result in structural damage.

# HMSB description

Industrial Hazardous Material Storage Buildings are portable, fire-rated buildings used for the safe storage of hazardous materials and waste. Applications include paint mixing, paint storage, and pumping stations. Hazardous Material Storage Buildings incorporate two-hour, fire-rated wall and ceiling construction.

## NOTE

Hazardous Material Storage Building have storage limits based on the type of material and its use, the fire protection type, and building size. Please refer to the building capacity label for this information.





# Preparing for installation

## Accepting delivery of your HMSB

A Hazardous Material Storage Building is delivered by trailer as a pre-assembled unit.

Upon delivery, inspect the Hazardous Material Storage Building for any signs of damage.

### **NOTE**

If you see shipping damage, note it on the freight carrier's paperwork; failure to do so may result in claim denial.

**If the Hazardous Material Storage Building is damaged**, contact Global Finishing Solutions at 800-848-8738 to speak to a Technical Service Representative.

### **NOTICE**

GFS recommends storing crates indoors pending installation. If you must store crates outside, protect crates and their contents from moisture to prevent damage to equipment.

## Gathering required documentation

Ensure that you can locate these documents and that they are available during the installation procedure.

### NOTE

Certain manuals, project drawings, and the Job-Specific Guide are also provided electronically to distributors via box.com. Many manuals are available for download on [globalfinishing.com](http://globalfinishing.com).

**Table 3. Additional documentation**

Document	Description	How provided
Design Drawings	Provides instructions for assembling this particular Hazardous Material Storage Building and includes information about the Hazardous Material Storage Building order, configuration, and components.	Ships in the "Miscellaneous" box
Electrical Drawings	Provides wiring diagrams for electrical components.	Ships inside the control panel

## Confirming site requirements

Before beginning the installation procedure, confirm that the site where the equipment will be assembled meets the following requirements:

- The floor where you will assemble the Hazardous Material Storage Building is level.
- The area is large enough to allow a minimum of 10 feet (3048 mm) of separation on all four sides of the Hazardous Material Storage Building (applies to outdoor units). Check local codes and refer to NFPA guidelines to determine particular space allowances.
- There is sufficient overhead clearance for an exhaust unit and the exhaust ductwork in the area where the equipment is to be located.
- A licensed electrician has verified that the incoming power meets the requirements specified for the equipment. (The power specification is included with the submittal or provided at delivery.)

# About the Design Drawings document

Use this manual in conjunction with the provided Design Drawings document. The Design Drawings document defines the overall layout and detailed structure of your particular product. If applicable, it also includes exploded-view diagrams and parts lists for each section of the Hazardous Material Storage Building.

## Page elements

Pages within the Design Drawings document contain the following elements:

- **Title block:** The title block is located along the right edge of each page. It contains the model information, drawing identification label or number, the order/serial number, and other information.
- **Model Info:** Contains text that identifies each page within the Design Drawings document, e.g., "Overall Assembly". When the installation instructions refer you to a specific page within the Design Drawings, look for that text in the Model Info field. (For a description of the various page types that might be included in your Design Drawings document, see "Page types" (page 14).)
- **Scale:** If the drawing is to scale, the scale is defined here (e.g., 3/16" = 1' 0"). Otherwise, this field contains "NTS," or "Not to Scale."
- **Drawings:** The main area of each page can contain any or all of these types of drawings:
  - Design loads, seismic design criteria, building data, explosion (deflagration) relief, field and device locations, fire protection data, material requirements, and capacity information.
- **Bill of Materials:** Any page that includes a drawing with labeled parts also includes a table that lists each item number with its corresponding part number and quantity.
- **Quantity per Booth:** Pages that show a subassembly of the product and list the quantity provided of that particular subassembly.
- **Notes:** Pages within the Design Drawings often contain notes that provide information about the materials used and equipment information.

**A**

EXPECTED AND UNEXPECTED USE:

QUANTITY PER BOOTH:

BOOTHING PACKAGES:

TOTAL QUANTITY:

**H**

**ASSEMBLY INSTRUCTIONS**

1. CHECK TOOLS REQUIRED (SEEN TOOLS AND MATERIALS)
2. AFTER BUILDING IS LEVEL AND SQUARE MAKE SURE WALL, CEILING AND CEILING JOISTS WHERE BUILDING CONNECTS ARE PROPERLY ALIGNED.
3. CORNER WALL STUDS AND CEILING JOISTS WITH DOUBLE #4x1/2 SELF TAPPING SCREWS SPACED 24" ON CENTER.
4. INSTALL INTERIOR AND EXTERIOR INSIDE ROOF AND GIRT STUDS.
5. PATTERNS SET BACK TO WALL STUDS AND CEILING JOISTS USING WALL TOP SHEET ROOF SCREW SPACED 24" ON CENTER.
6. PATTERNS EXTERIOR ROOF STUDS TO ROOF JOISTS USING #4x1/2 PATTERNS AND SELF TAPPING SCREWS SPACED 24" ON CENTER.
7. PATTERNS ROOF SCREWS USING #4x1/2 SELF TAPPING SCREWS.
8. PATTERNS DRINKING BARS TO BARS USING #4x1/2 SELF TAPPING SCREWS.
9. CHECK ALL SCAMS WITH LATCH CHAINS.

BOOTH	ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	SIZE	ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL
C	17	2	CF-4100	OUTSIDE BOARD, 48x144, CUT TO FIT	18 WP	22	1	1	CS-624	FRONT VERTICAL, 120x118	18 WP
C	18	2	CF-499	1/4" SOLID WHITE, 24x62 1/2 x 123 5/8 IN. CUT TO FIT	18 WP	22	3	1	CS-52P	FRONT VERTICAL, 120x118 x 3/8"	18 WP
C	19	1	CF-497	1/4" SOLID WHITE, 24x62 1/2 x 123 5/8 IN.	18 WP	22	4	1	CS-52P	FRONT VERTICAL, 120x118 x 3/8"	18 WP
C	20	2	CF-510	ROOF TRIM, 6x60 1/2 x 36,625 IN.	18 WP	22	1	2	CF-514	1/4" SOLID WHITE, 24x62 1/2 x 123 5/8 IN.	18 WP
C	21	3	CF-518	1/4" SOLID, 18x68 1/2 x 28,625 IN.	18 WP	22	1	2	CF-515	TRIM, 4x10	18 WP
C	22	1	CS-2003	CORNER BRACING BAR, 25 1/2 x 1 1/2, 42 7/8 IN.	Copper	11	2	1	PL-01P-2014S	CORNER BOARD, 48x144, CUT TO FIT	5/8 OIP
C	23	1	SPF-4026-100	SHROULDER, 22 1/2 X 100X1 1/2 2000000	-	13	2	1	PL-01P-2014S	CORNER BOARD, 48x144, CUT TO FIT	5/8 OIP
C	24	2	SPF-4026-100	SHROULDER, 22 1/2 X 100X1 1/2 2000000	-	13	1	1	PL-01P-2014S	CORNER BOARD, 48x144, CUT TO FIT	5/8 OIP
											15
											14
											15

**G**

**F**

**D**

**E**

**DETAIL C**

**DETAIL B**

**NOTE:** CORNER BOARD SENT IN 48" LAY SHEETS INSTALLED TO BE CUT AS NECESSARY.

**B**

**A**

**C**

**I**

**GLOBAL FINISHING SOLUTIONS**  
 13731 HOBWAY ROAD  
 OSSEO, WI 54758 USA  
 800-948-8738  
 globalfinishing.com

DATE: 11/27/18  
 DRAWING SET: 801  
 DRAWING: 2

- A: Serial number
- B: Model info
- C: Drawing number
- D: Drawings: Main view (exploded and/or assembled)
- E: Drawings: Detail view
- F: Bill of materials
- G: Quantity per booth
- H: Notes
- I: Title block

## Page types

The Design Drawings document may contain any of the following pages that apply to your particular product.

**Table 4. Page names in the Design Drawings document**

Page name	Description
Cover Page	Provides the product name and description, the customer name, the shipping location, and a table of contents for the Design Drawings document.  <b>NOTE</b> This is always the first page of the Design Drawings document.
Fluidized Bed Assembly	Shows how to install the fluidized bed assembly into the Powder Collection Module, if applicable.
General Structural Notes	Shows how to anchor various booth components to the slab.
Concept Drawing	Shows a top view of the booth (labeled "Plan View"), as well as front, side, and rear elevations.
Overall Assembly	Shows an exploded view of the entire booth; identifies the major components and sub-assemblies of the booth.
Module	Shows how to assemble the the Powder Collection Module and cartridge filters.
Powder Collection Drawers	Shows how to install powder collection drawers into the Powder Collection Module, if applicable.
Product Door	Shows how to install a product door frame, the product door, and its associated hardware.

# Required materials

This section lists the tools and equipment required to place your pre-assembled Hazardous Material Storage Building.

**NOTE**

Depending on the building placement, additional tools or equipment may be required.

- Screwdrivers
- Wrenches and socket set
- Crane or appropriate lifting device for unloading the unit from the trailer

**NOTE**

The building's weight can be found in the Building Data section of the Design Drawings.

- Tools required for anchoring the Hazardous Material Storage Building to the floor

# Installation procedure

This procedure describes how to unload, install, and ground your Hazardous Material Storage Building.

## Building location

- The building must be positioned on a concrete slab.
- 10 feet (3048 mm) of separation between the Hazardous Material Storage Building and other buildings is regulated by local building codes.
- Explosion (deflagration) relief panels, if supplied, may impact building orientation.

### NOTE

Review by the authority having jurisdiction (AHJ) and the insurance provider is recommended.

- All models are equipped with four-corner hold down points. These should be bolted to the concrete slab with expansion anchors.

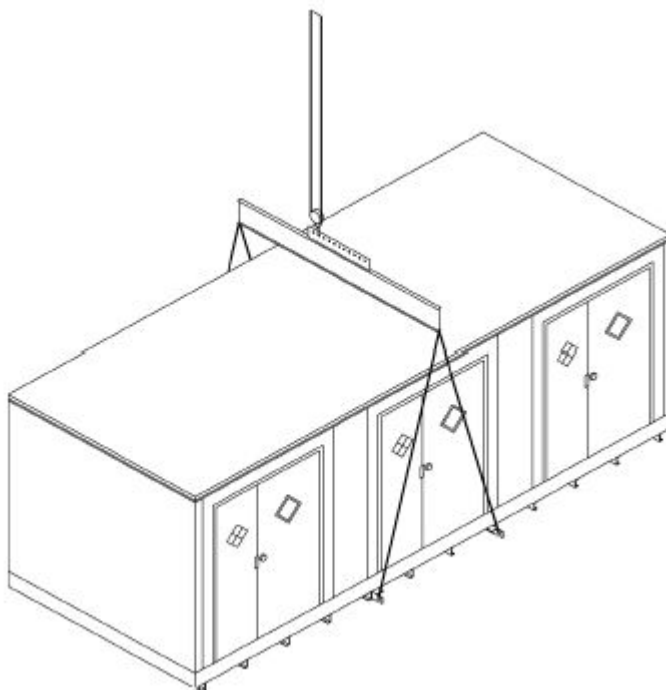
## Unload the building

### NOTE

The Hazardous Material Storage Building is delivered by trailer as a pre-assembled unit.

### NOTE

Lifting lugs are provided to lift the Hazardous Material Storage Building off of the truck and position it in the desired location.





1. Use the bolt-on lifting lugs that are located under the sump and a spreader bar for crane lifting.
2. Lift and move the building to its desired location.
3. Unbolt the lifting lugs, store them under the building, and rebolt.
4. Bolt the four-corner hold down points to the concrete slab with expansion anchors.

**CAUTION**

Please consult Global Finishing Solutions at (800) 848-8738 to speak to a Technical Services Representative if you have questions regarding the loading or unloading of the building. Structural damage caused by improper lifting may result in costly and time-consuming repairs.

## Install the building grounding equipment

Each Hazardous Material Storage Building is equipped with the following:

- A static grounding bar
- An exterior grounding lug
- Six feet of #6 ground wire
- An 8-foot grounding rod with clamp

Complete the procedure below to install the grounding equipment:

1. Attach the ground wire to the grounding lug located on the right side of the building.
2. Insert the grounding rod into the ground.

**NOTE**

A 6-foot minimum of earth penetration is recommended.

3. Attach the ground wire clamp on the grounding rod.

## ***If applicable:* Install the explosion control method**

**Scope:** The tasks in this section apply only if the site purchased an optional explosion control method with their HMSB.

## Install the explosion (deflagration) relief panels

### NOTE

Optional explosion (deflagration) relief panels are located in the walls of the Hazardous Material Storage Building.

1. Once the building is in place, remove four self-tapping screws in each panel. (The screws are placed for security during shipping.)
2. Refasten the door with four explosion (deflagration) relief fasteners (green washers) using the same holes created for the shipping screws.



Figure 1. Explosion (deflagration) relief back wall detail

## Install the explosion (deflagration) prevention system

**Scope:** An explosion (deflagration) prevention system must be commissioned by the GFS service tech to ensure code compliance.

### NOTE

The optional explosion (deflagration) prevention system is custom engineered to prevent the possibility of deflagration occurring. A gas monitor varies the ventilation rate within the building to provide adequate airflow for a safe environment.

**Reference:** Refer to the ventilation system manufacturer's data for installation, operation, and maintenance information.

## Fire protection systems

### Dry chemical systems

**Reference:** Refer to the fire suppression system manufacturer's data for operation and maintenance information.

Dry chemical fire suppression systems are pre-engineered and factory installed. The systems are shipped unactivated to prevent accidental discharge during transit and installation. It is the customer's responsibility to have the system activated.

### Sprinkler systems

**Reference:** Refer to the Design Drawings for sprinkler system specifications.

**Reference:** Refer to the sprinkler system manufacturer's data for operation and maintenance information.

Piping and sprinkler heads are factory installed. It is the customer's responsibility to connect the system to a water supply and provide a separate control valve.

# Maintenance procedures

## Maintenance schedule

Items to Be Inspected and/or Cleaned	Weekly	Every 6 Months
Check the storage containers for leaks and clean up any spills.	X	
Inspect interior and exterior paint; prime and paint with a polyurethane paint if damaged.		X
Check and replace floor grating if damaged.		X
Check the mechanical ventilation system and refer to the fan manufacturer data for maintenance instructions. Repair or replace immediately if inoperative.	X	
Inspect and replace lighting as necessary, refer to the light manufacturer data for maintenance instructions.	X	
Inspect door locks, latches, and seals; repair and replace if needed.		X
Check the explosion (deflagration) relief panel seals; replace if needed.		X
Arrange inspection of electrical and adherence to fire safety by local authority/agency.		X
Check the fire suppression system and refer to the system manufacturer data for maintenance instructions. Repair or replace immediately if inoperative.	X	
<i>If applicable:</i> Check the heating and cooling systems and refer to the manufacturer data for maintenance instructions.		X