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# STRUCTURAL PANELS INC.

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INSULATED PANEL BUILDING SYSTEMS

ROCKWALL™ PANEL SYSTEM

HANDLING MANUAL



# Contents

Part I General Procedures.....	3
1.1 Scope.....	3
1.2 Limitations .....	3
1.3 Installer’s Responsibility.....	4
1.4 Tolerances Alignment Tolerance.....	5
1.5 Industrial Applications .....	5
1.6 Architectural Application .....	5
PART II HANDLING, MAINTENANCE, AND CARE .....	6
2.1 Panel Storage and Handling .....	6
2.2 Proper Equipment .....	8
2.3 Manually Handling Panels.....	9
2.4 Lifting Panels: Vacuum Lift Equipment .....	10
2.6 Storage.....	11
ROCKWALL Help & Support.....	12

**Also see ROCKWALL Installation Manual**

## Part I General Procedures

### 1.1 Scope

Structural Panels Inc. (SPI) ROCKWALL™ mineral wool metal panel is designed for commercial and industrial walls.

The vertical and horizontal joint applications provide designers with a wide range of practical and aesthetically pleasing design flexibilities and the system allows a tight and well–designed building envelope on appropriate framing.

ROCKWALL™ Panels have 26 gauge G90 galvanized steel skins with a smooth or embossed silicone polyester shadow line finish.

ROCKWALL™ mineral wool panels meet requirements specified in most building codes.

### 1.2 Limitations

These instructions are provided as a general guide to SPI customers and their contractors with procedure and guidelines for the installation.

**Before using any of these instruction procedures the installer should:**

- Check all applicable federal, provincial and local codes to verify compliance with the code.
- Be certain that site conditions are such that safe working practices are strictly observed.
- Review all installations drawings and associated documents for the project.
- Consult with general contractor, design engineer, architect and/or owner to confirm that the suggested procedures are suitable for each specific installation.
- Recognize that the substitution of components not supplied by SPI may require some procedures different from those recommended.

- Comply with all safety regulations.

All materials supplied by **SPI** are subject to a limited warranty.

Because of variations possible with any building, a careful study of the installation drawings should be made, along with the study of all documents provided with the project. Details may require adaptations, changes or revisions as conditions may vary from one project to another and may be unique for each application.

If suitable, details supplied by **SPI** may be used to supplement project installation drawings but should not override them without approval of those responsible for the project.

It is the responsibility of the designer, general contractor, and installer that the details used meet particular building requirements and ensure adequate water tightness.

**SPI is not responsible for any and all claims arising from lack of water tightness as a result of not following suggested typical detail drawings.**

The designer and installer must be aware of and allow for expansion and contraction of wall panels when designing and/or installing flashing.

### **1.3 Installer's Responsibility**

Ensuring adequacy of framing materials, structures, and mid-wall girts shall be determined by the installer. **SPI** is not responsible for any claims resulting from any inadequacy.

The installer shall familiarize himself/herself with all erection instructions before starting work. The installer shall examine the substrate to ensure that all supporting members are straight, level, plumb, and true. Report any variation and potential problems to the architect and do not start work until unsatisfactory conditions have been corrected.

Workmanship shall be to the best industry standards, and installation shall be performed by experienced metal craftsmen. Oil canning in the flat area of the panels is common to the industry and shall not be cause for product refusal.

#### **1.4 Tolerances Alignment Tolerance**

The alignment of panel supports is important as it establishes final alignment of the wall. As the seal is typically between the liner and the support, any shimming of the panel would lead to a break in the seal. As well, improperly aligned supports can include panel stresses and lead to distortion of the panels. The following support alignment tolerances are often satisfactory on thinner panels.

#### **1.5 Industrial Applications**

Support alignment shall not deviate more than 10mm (3/8") in any 6m (20') lengths in any direction. The support alignment shall not deviate more than 19mm (3/4") from the theoretical girt plane at any point on the wall.

#### **1.6 Architectural Application**

Support alignment shall not deviate more than 6mm (1/4") in any 6m (20') length in any direction. The total alignment envelope shall not be more than 12mm (1/2") from the theoretical location over the entire wall with the exception of transition areas such as building corners and soffits. Alignment in these transition areas must be within 3mm (1/8") of the theoretical plane to accommodate corner panels or formed transition pieces.

## PART II HANDLING, MAINTENANCE, AND CARE

### 2.1 Panel Storage and Handling

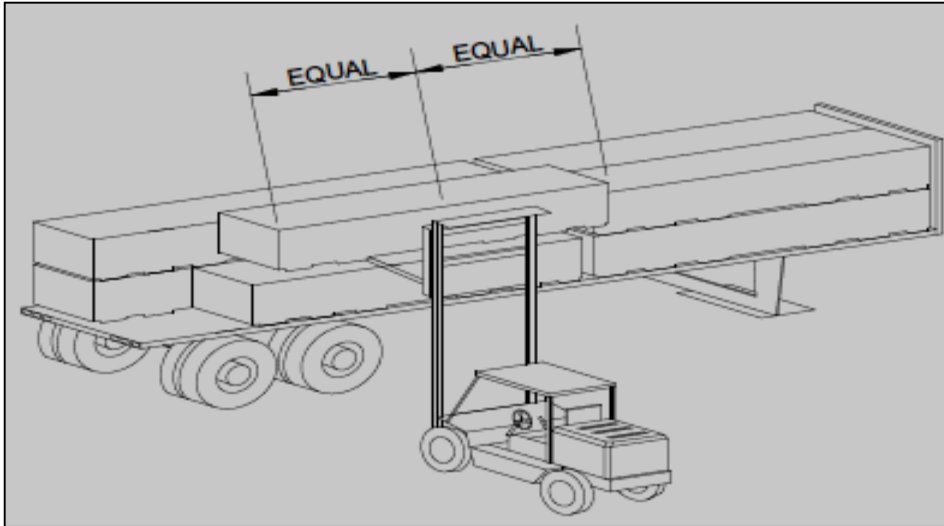
Customers will need ample storage space to receive packages. Exercise care in storing, handling and placing all paneling to prevent damage likely to impair the adequacy of appearance of the material.

When **ROCKWALL** panels are shipped to the site, customers should inspect the shipment when received. Please ensure item numbers on the package list correspond with supplied materials. If there are any variances, please make notes on the bill of lading when signing for delivery approval and contact **SPI** shipping as soon as possible.

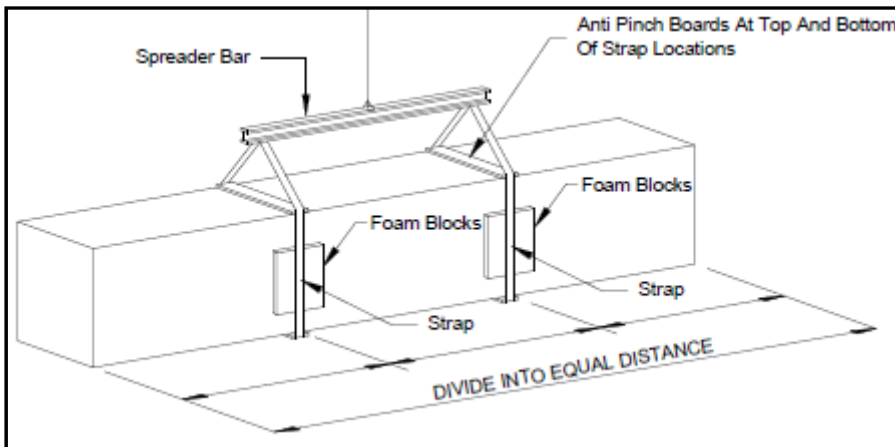
Please also report any damage incurred during shipment. Photos are taken before panels leave the plant and it is recommended that photos be taken if damage is noted upon receiving panels.

Blocking of shipped panels is specifically designed for safe unloading. When unloading panel bundles up to 15 feet in length, the forks should be placed under the center of the packages.

When unloading bundles longer than 15 feet; two or more lifting points are required due to the increased weight of the mineral wool core (as illustrated below). Blocking or spacers should be used to protect the bundled panels from the forklift blades and mast when lifting.



When an overhead crane is used, reinforced nylon straps must be located at a minimum of two points along bundle. Suitable stiff inserts should be at sling locations to protect panels from damage. When bundles longer than 15 feet are lifted by a crane, a suitable spreader bar should be used between the straps, as illustrated below.



In all cases, panels should not deflect significantly during the lifting process, the longer the panel, the greater the potential for deflection.

In handling panels individually, they should be carried in a flat position, not vertical. Never drag panels when removing them from a bundle.

**SPI** does not take any responsibility for damages resulting from mishandling of panels. Damaged material shall be replaced or corrected to the approval of the architect and any costs incurred shall be borne by the parties responsible for the damage.

Shipped panel bundles are plastic wrapped and can withstand temporary outdoor storage. Panels must be stored in a protected area away from standing water or drifting snow.

Ventilation can be enhanced by making small slits at intervals along the bottom of the bundle. Inspect panels daily for moisture. If panel bundles contain moisture, the panels should be re-stacked. Use care in re-stacking with proper lifting and handling to avoid damage to panels.

If panels are not used within 3 weeks, they must be tarped, protected, or stored indoors to avoid both moisture and UV damage. **SPI** shipping wrap is not intended to withstand long-term storage.

Flashing and accessories should be stored in a secure area and protected from damage, weather and theft. Fasteners, sealants, etc. should be stored out of the weather and protected from contamination.

## **2.2 Proper Equipment**

Before receiving the materials and before starting the panel installation, ensure that the proper equipment and tools are on hand.

Unloading panel bundles will require a suitable fork lift or crane. The equipment must be capable of handling the weight and multiple points pick up requirements of the panel bundles and have sufficient mobility for the job site's travel requirements. For specific equipment requirements, reference the "Unloading Panel Bundles" detail above (2.1).



The equipment for handling the individual panels must be capable of carrying the panel's weight and be capable of the project's reach and travel requirements.

**ROCKWALL™ panels are much heavier and require greater support than foam core panels.**

In all cases, reference the equipment manufacturer's instructions to assure that the equipment is of sufficient capacity for the panel's weight and length and to assure the proper and safe operation.

All equipment and tools must be in good operating condition and the operators must adhere to safety precautions at all times. Worn out or improperly operating tools, too few tools, inadequate power source, or other equipment deficiencies slow down the installation process. The cost of inefficient working conditions is usually greater than the cost of providing good equipment.

### 2.3 Manually Handling Panels

Improper manual handling of the panels can be hazardous to the workers and can cause damage to the panels and adjacent materials.

It is recommended that the panels be handled with appropriate lifting equipment. However, when it is necessary to manually handle panels, use extreme caution and assure there is adequate manpower to safely lift and carry the panels. The panels should be lifted by a sufficient number of workers equally spaced along each edge. The workers must lift only on the bottom face of the panel and must lift together to assure that the panel does not sag or twist. Before lifting, push panel sideways to break suction between two panels.

**Face Separation** – do not try to lift the panel by the edges of the topside face. This will cause the panel's face to separate from the core.

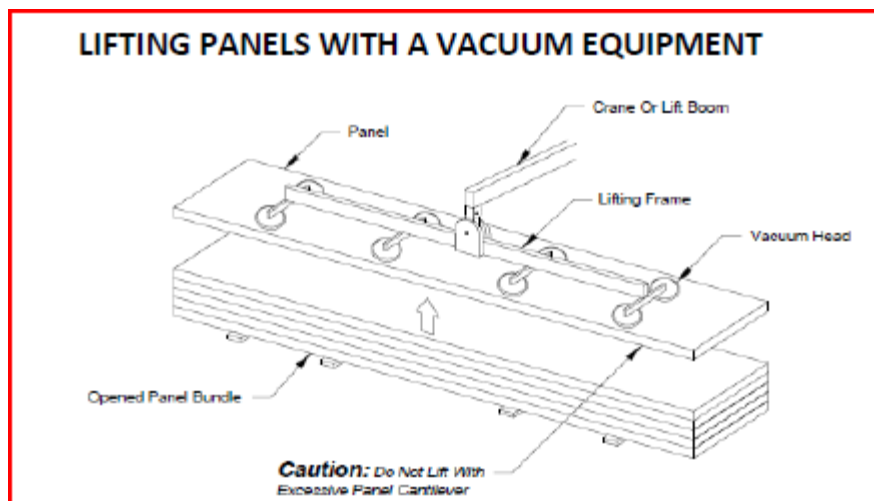
**Core Damage** – do not try to lift the panel by the edges of the mineral fiber core. This will cause distortion or breakage of the core's critical tongue and groove profile.

**Turning Panels** – when the panel must be rolled or tilted on its edge, roll the panel onto its female edge and place cushioning material under the edge to prevent crushing and finish damage.

**Blocking** – when the panels must be set on the ground, provide sufficient blocking to assure that the panel is cushioned against face damage and is uniformly supported.

## 2.4 Lifting Panels: Vacuum Lift Equipment

ROCKWALL panels are much heavier than polyurethane or EPS panels. The recommended method of lifting is with an OKTOPUS®G1-B400 vacuum lifting device, Wood's Powr Grip, or other suitable panel lifting suction device.



## 2.5 Blue Protective Plastic Film

Protective plastic film (usually blue) is applied to the panels to help prevent damage in shipping and handling. This film is not to be removed until the components are ready for erection on the job site.

The protective plastic film is not to be exposed to direct sun for more than a week. This may cause the plastic to bond to the metal and make it more difficult to remove.

Panel bundles not used within 3 weeks should be stored away from the sun and weather elements to prevent damaged to the adhesive on the film.

Remove the protective plastic film from a corner and pull off at 45 degree angle. If the metal face remains sticky after the plastic is removed, clean with a soft cloth and water.

## 2.6 Storage

The mineral fibers of the **ROCKWALL™** panel core are moisture resistant. However, moisture can migrate between the fibers if allowed to enter the exposed core at the panel's ends and edges.

Freezing of moisture within the panel's core and long-term accumulation of moisture within the core will cause deterioration and structural damage to the panel.

During transit and job site storage, the bundle's factory wrapping will protect the panels from wet weather. If the wrapping is damaged, or if the wrapping has been removed, the panels will have to be protected by indoor storage or a suitable covering. The panels must be raised above standing water and accumulated snow or ice.

## ROCKWALL Help & Support

Our dedicated, highly specialized team is able to offer you all the technical support you need to carry out your building projects with ROCKWALL products. From product information to on-site installation support, we will provide personal assistance with your construction enterprise.

For assistance with our products or questions please contact us at:

Structural Panels Inc. [www.structuralpanels.ca](http://www.structuralpanels.ca)

4741 County Rd 45, Box 129  
Baltimore On  
K0K 1C0  
905-372-0195

### Technical information, product requests:

Rick Thorne  
[rthorne@structuralpanels.ca](mailto:rthorne@structuralpanels.ca)  
905-372-0195 Office  
905-3775669 C

### Sales information, technical support:

Jonathan (Jon) Hill  
[jhill@structuralpanels.ca](mailto:jhill@structuralpanels.ca)  
905-372-0195 Office  
705-875-2464 C