

OWNER'S MANUAL HOG SLAT PRECAST SLATS



Handling Procedures



1. In order to minimize damage to the slats, it is recommended that they are handled as few times as possible. Ideally, the slats should be set directly off of the delivery truck into the house using a crane or boom with an approved slat hook or lifting device. If a crane or boom is not available, a forklift or bobcat can be used to set the slats.



2. If it is not possible to set the slats immediately upon delivery, it is important that they are unloaded and stored properly on site. It is recommended that the slats be stored as close as possible to the building site to minimize the chances of damaging the slats. If using a forklift to offload the slats, it is recommended that the fork masts are padded with rubber, such as a piece of old tire, to lessen the chance of bumping the slats directly against the steel and chipping or spalling them. The forklift should be of the proper capacity to pick and carry the slats or lintels safely and within manufacturer guidelines. The ground underneath the delivery truck and the forklift should be smooth, flat, and compacted, so as to cause as little bouncing of the slats as possible while being carried by the forklift. Slats must be picked up flat, without tilting, or cracking will occur on the outside gangs.



3. Care should be taken when placing the forks between the slats and when backing the forklift out so as not to scrape the slats in the stack and damage them. It is necessary to adjust the forks as wide as the machine allows so that they are as close to the wood dunnage as possible. Ideally, the forks should be placed just outside the wood dunnage so as not to place undue stress on the slats. When this is not possible, no more than two slats at a time should be picked up and in no case should more than four slats be picked up at one time. Extra care should be taken when handling four slats at a time since the chance of damaging the slats is greater.



4. Stored slats should be placed on smooth, dry, level, and compacted ground that is free of debris, with wood dunnage placed between the slat and the ground. Slats must be stacked with the wood dunnage lined up in a straight vertical line between the pieces. Slats are indented to provide a clear visual as to where the dunnage must be placed. **Stored slats should not be stacked more than four high.** Failure to follow these steps is likely to cause the slats to crack and will void the warranty.



5. If you find slats that are defective or damaged, **DO NOT** mark them with paint or anything else. **CONTACT US IMMEDIATELY AND WE WILL SEND A REPRESENTATIVE TO THE SITE.** Report damage at the time of delivery.



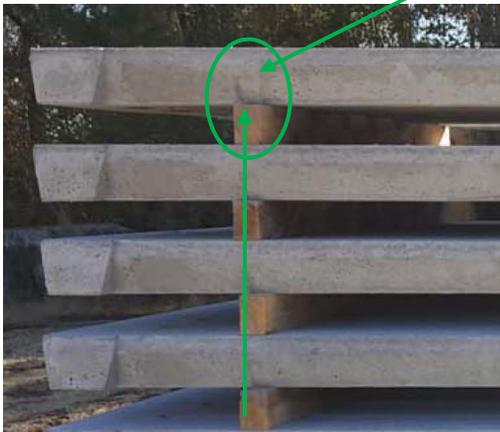
6. A slat hook, if used, is designed to lift **one** slat at a time under the center cross support. Never pick up two slats at one time with a slat hook. If two at a time are picked up, you could crack the slats and will overload the slat hook, causing a possible serious accident. All lifting devices should be tagged with the rated load capacity. **DO NOT** use lifting devices that are not tagged. If you have questions on the proper use of a slat hook, contact your salesman.

We hope that these procedures will help you better handle your slats. If you have more specific questions, feel free to contact your salesman or the Hog Slat office in your region.

Transportation Procedures

1. Slats are shipped in full flatbed truck loads whenever possible. Truck decks are to be in good condition and free of any damage and debris.
2. Slats are loaded at our plant taking care to not damage the slats while they are being moved. A packing material is to be placed between stacks that are loaded side by side.
3. Dunnage is to be placed between the bottom slat and the truck bed in the same location as the dunnage between the slats in the stack (indentions in slats indicate proper placement).

Correct dunnage location at indentions



Incorrect dunnage location



4. Tie down straps are to be placed over the dunnage as close as possible to the dunnage (as shown below). **It is not acceptable to place straps outside of the dunnage.** Straps should be carefully tightened so the slats are held securely in place. After the load of slats has traveled 50 miles (80 kilometers), the driver must stop and check the tightness of the straps again. Failure to do this can cause the dunnage to slip or slide, creating undue stress on the slats and possibly cracking them.

Correct tie down strap location



Incorrect tie down strap location because strap is outside of dunnage

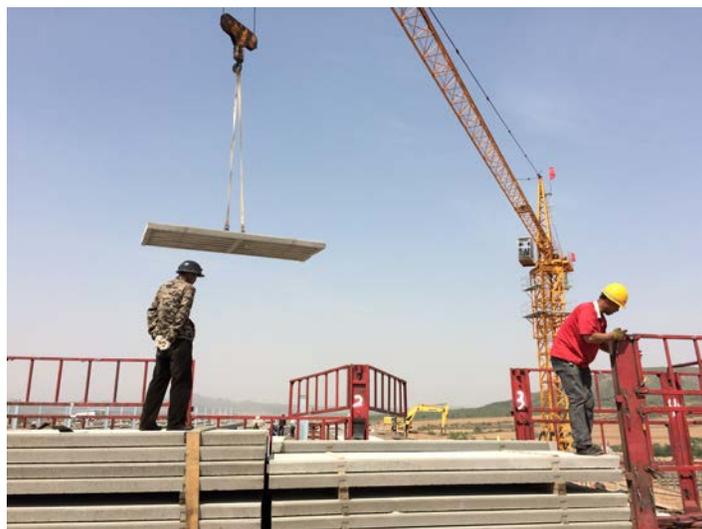


5. Slats that are being returned from a jobsite are to be placed on the truck and tied down in accordance with the above procedures. Failure to do this will cause damage to the slat, and will void any credit for the returned slat if it is damaged.

6. Only Air Ride Trailers should be used.

Setting Procedures

1. Setting the slats into the building needs to be done with the help of a crane or a forklift following the Slat Handling Procedures. When the supports under the slats are not even, pvc or stainless steel shims with different thicknesses should be placed under the slat to even the top surfaces of adjacent slats. **Do not use wood or plain steel pieces!!!**
2. The minimum distance to support the slats on lintels or walls is 2 inches (5 cm). The optimum support distance is 5 inches (12.5 cm).
3. For farms that are being remodeled, it is necessary to inspect the integrity and strength of the supports that slats will bear on.
4. For new construction, we recommend setting the slats before erecting the structure. This allows easier access for the crane and will reduce setting time.
5. When setting slats, it is important to follow all local safety and building codes. Workers should never stand or walk under a slat that has been lifted by a crane or forklift. Only approved lifting devices that have been inspected prior to beginning the setting of the slats should be used.
6. We do not recommend cutting slats. When a slat is cut, the metal reinforcement is exposed and subject to rapid corrosion and deterioration. Unfortunately, some instances call for a slat to be cut. In these cases, it is imperative that the exposed metal reinforcement be coated with an approved sealant. **IN NO CASE** should an individual slat gang be cut!!





7. Minor chipping and spalling of the slats sometimes occurs during setting and handling. We can provide a fast setting slat patch to repair these defects. A grout can be used to fill in gaps around the slats if necessary. Apply patching material as per instructions on the container.

8. Slats used around wet dry feeders are subject to an overly corrosive environment because of constant contact with feed and water. It is highly recommended that these slats be treated with an initial and maintained surface treatment. Slats used around wet dry feeders, that are not pretreated, will not be covered under this warranty.

9. Hog Slat Precast Concrete Slats have been designed to withstand the normal loading that occurs in a hog house, including animals, penning equipment, and workers. Other loads, such as concrete or block walls, concrete walkways, concrete pads, structural walls, stored building materials, and any type of vehicle are not to be placed on the slats. Failure to follow this procedure will void this warranty. If you find slats with larger cracks, or if you find slats which are defective, please contact us immediately.

Cracking In Precast Concrete Slats

Concrete is an excellent product that can carry large loads when properly supported. Concrete does very well in compression by itself, but does not do well in tension, such as in unsupported areas or cantilever situations. Therefore, steel reinforcing is added to the concrete. Hog Slat Precast Concrete Slats have two layers of steel reinforcing to allow the slats to be delivered to the final site inside the building, span up to 10 feet, and carry all of the designed loading required in a hog house. Steel reinforcing will not prevent the concrete from cracking, but will control the width and depth of the cracks. The reinforcing will allow the slat to have more small cracks rather than several large cracks. Some amounts of smaller cracks are normal and acceptable in any concrete product. If you find slats with cracks larger than the ones that are allowable in the Slat Crack Specification chart, please contact us immediately so we can send a representative to the site.

Slat Crack Specifications

Acceptable Value / Limits / Appearance

Dimensions of slat (versus the designed value)	Length : $-1/4 \pm 1/8$ inches -6 ± 3 mm
	Width : $-1/8 \pm 1/16$ inches -3 ± 1.5 mm
	Depth : $\pm 1/8$ inches ± 3 mm
	Slot width : $\pm 1/30$ inches ± 1 mm

Top Surface



Top finish must be a uniform light broom swirl finish without any air voids and honeycombed areas.

Slat edges and slots are clean and free of sharp edges.

Sides

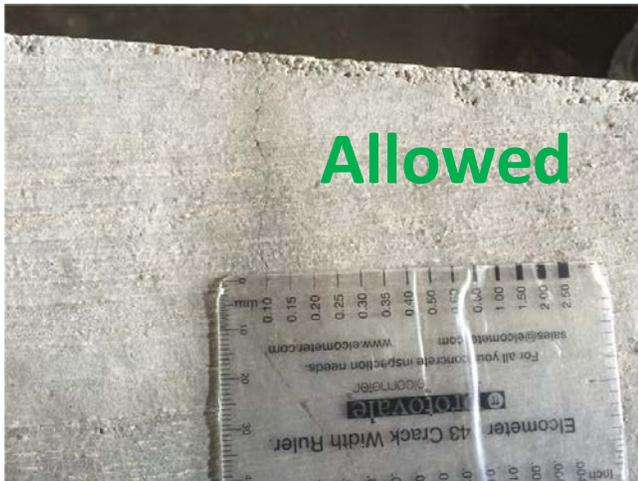


Sides of the slat should be free of honeycombs.

Top Tension Cracks	Top tension cracks should not extend downward more than 2.25" (6 cm). Cracks should not be more than 0.5 mm in width (as measured with Elcometer Crack Width Ruler)
Bottom Tension Cracks	Allowed width \leq 0.5mm, not extend upward more than 2.25" (6 cm) (as measured with Elcometer Crack Width Ruler)
Full Depth Cracks	Full depth cracks extending across the slat are not allowed
End of Slot Cracks	Allowed width \leq 0.5mm.

Elcometer Crack Width Rulers are small, inexpensive tools used to measure cracks in concrete. Typically, the ruler is the size and shape of a credit card. They can be purchased online at www.hogslat.com. Part # E143.

Top Tension Cracks



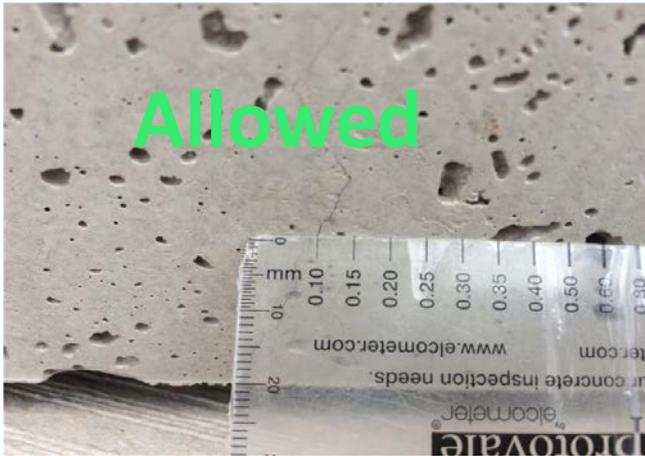
Top Tension Crack	Allowed
Width	$\leq 0.5\text{mm}$
Length	$\leq 60\text{mm}$
Number	No limit

Top Tension Cracks



Top Tension Crack	Not allowed
Width	$> 0.5\text{mm}$
Length	$> 60\text{mm}$
Numbers	No limit

Bottom Tension Cracks



Bottom Tension Cracks	Allowed
Width	≤0.5mm
Length	≤60mm
Number	No limit



Bottom Tension Cracks	Not Allowed
Width	> 0.5mm
Length	> 60mm
Number	No Limit

Full Depth Cracks



Full depth cracks extending across and down gang and /or the slat are not allowed.

End of Slot Cracks



End of Slot Cracks	Allowed
Width	≤0.5mm
Length	≤60mm
Number	No limit



Rejected

End of Slot Crack	Rejected
Width	> 0.5mm
Length	> 60mm

Maintenance/Repair

Slats should be visually inspected each time the building is emptied and cleaned between groups. Schedule an annual inspection in breeding and/or gestation barns. Routine examination of slats will allow an operator to identify normal wear or damage, and also take the proper steps to correct the problem before it becomes too severe.

Slight wear should be expected during the lifetime of a slat, and sometimes in as little as 6 months around waterers and feeders. This wear is not an indication of poorly made or defective slats. Slat surfaces around waterers and feeders should be covered with a protective coating at initial placement. This coating will help protect the concrete from acid compounds and heavy pig traffic.

As normal wear continues over time, in most cases repairs will need to be made. As aggregates begin to become exposed, plans should be made for repair. Quick setting, abrasion resistant mortar products are best used.



PRECAST CONCRETE SLAT LIMITED WARRANTY

What is Covered: Hog Slat, Inc. warrants to the original purchaser (“Purchaser”) of its precast concrete products when used as hog equipment (the “Product”), subject to the exclusions and limitations set forth herein, the Product shall be free from defects in material or workmanship resulting in Product failure for a period of 10 years from the original date of purchase in accordance with the detailed terms set out below.

Remedy: In the event a Product is determined to have failed as a result of a defect in material or workmanship, Hog Slat, Inc. will, at its sole option, either repair the Product or deliver a replacement Product (“Replacement Product”) to the Purchaser in accordance with the below pro-ration schedule based on the time from the purchase date:

During the first five years from the date of purchase of the Product, Hog Slat, Inc. will at its sole option either repair the Product at no cost to the Purchaser, or deliver a Replacement Product at no cost to the Purchaser, inclusive of the cost of shipping;

During the remaining five years of the warranty, Hog Slat, Inc. will at its sole option either repair the Product for the Purchaser or deliver a Replacement Product to the Purchaser on a pro rata basis (This means you will be responsible for paying a portion of the cost) at the following reduced costs off the then current actual cost of repair or list price of the Replacement Product, with the Purchaser to pay the cost of shipping.

Year 6	50% off repair cost or list price
Year 7	40% off repair cost or list price
Year 8	30% off repair cost or list price
Year 9	20% off repair cost or list price
Year 10	10% off repair cost or list price

After ten (10) years the warranty does not apply.

What is Not Covered/Exclusions: This warranty shall not apply if the defect or failure is a result of any of following factors or situations:

The Product has not been installed in accordance with Hog Slat, Inc.’s instructions and specifications.

The Product is used for a purpose other than as hog equipment. In the event the Product is used for any other purpose, the product is sold “AS IS” and there are no warranties.

Structural defects exist in the foundation, walls or footings of the building or structure in or to which the Product is attached or installed.

Damage to the building or structure in or to which the Product is attached or installed results in damage to the Product, damage to the Product occurs during initial or subsequent installation or construction of a connected or associated building or structure, or damage to the Product is caused by natural disasters such as lightning, floods, hurricanes, earthquakes, tornadoes, fire, or any other act of God.

The Product is used with wet dry feeders without the initial use and thereafter maintenance of protective preventative measures to protect the Product from deterioration caused by the feed and water.

Use of Slat-Locs or GRO-Locs to anchor penning.

The Product is exposed to fire, or excessively exposed to water, heat or chemical treatments that deteriorate the Product.

Driving or otherwise using heavy machinery or equipment on the Product.

Damage resulting from accident, misuse or abuse, or lack of reasonable care.

Failure to perform routine maintenance according to the Product manual.

Limitations:

Hog Slat, Inc. is not responsible for installation of Replacement Products. Its sole obligation in the event it elects to deliver a Replacement Product is to deliver the Replacement Product to the Purchaser at the site at which the Product claimed to be defective is or was in use.

Hog Slat, Inc. is not responsible to refund the purchase price of the Product or any pro-rata portion of the purchase price.

Hog Slat, Inc. shall not be liable for any consequential or special damages related to the Product or Product failure, including, but not limited to, loss of time or use, inconvenience, animal performance, or any personal or economic injury.

Hog Slat, Inc. shall not be liable for the repair or replacement of the Product where the failure or defect is the result of damage to any building or structure of which the Product is a part, or damage to any property, real or personal, to which the Product is connected, associated with or used in conjunction with.

Small cracks in concrete result from normal expansion and contraction and are not considered a defect or failure, and are not covered by this warranty.

Who is Covered: The warranty is limited to original Purchaser of the Product and is not transferable to subsequent users of the Product.

Your Obligations/How to make a Claim: This warranty is expressly conditioned on the Purchaser giving written notice to Hog Slat, Inc., of any claim of a defect covered by the warranty within sixty (60) days of the first visible evidence of a defect or failure and maintaining the Product in a safe and secure condition so that the Product may be timely inspected by Hog Slat, Inc. to make a determination whether the product has failed and is defective and whether the warranty applies. All notices shall be sent by certified mail return receipt requested to “Claims – Hog Slat, Inc. P.O. Box 300 Newton Grove, NC 28366” and shall include a copy of the purchase invoice, a statement of the nature of the failure, the location of the Product, and the contact information for the Purchaser. Upon receipt of the notification Hog Slat, Inc. will make such investigation as it deems appropriate, and as a part of the same Purchaser shall cooperate and make both the Product and site of the Product available for inspection. Hog Slat, Inc. will thereafter make a determination whether the Product has failed due to a defect in material or workmanship that is covered and not excluded by this warranty and notify to Purchaser of that determination as well as the pro-rata cost of the repair or replacement, if any. In the event Hog Slat, Inc., determines that a failure has occurred due to a defect in material or workmanship that is covered by this warranty, the Purchaser shall cooperate with Hog Slat, Inc. in allowing reasonable access to the Product or Product site, and after the initial five years of the warranty, make payment of the pro-rata cost of the repair or pro-rata price of the Replacement Product and costs of shipping, prior to Hog Slat, Inc. making the repair or delivering the Replacement Product. In the event Hog Slat, Inc. determines that the Product has not failed due to a defect in material or workmanship and that the warranty does not apply, Purchaser shall have the right to challenge this decision by filing a demand for arbitration within sixty (60) days of receipt of Hog Slat, Inc.’s decision in accordance with the terms of this warranty set out below.

Arbitration: Any claim or dispute relating to this warranty shall be resolved through final and binding Arbitration to be administrated by the American Arbitration Association (“AAA”). All Mediations and Arbitrations shall be governed by AAA’s Rules and Procedures and the fee schedule in effect at the time such claim is filed. Any award of the Arbitrator is final and binding, and may be entered as a judgment in any court having jurisdiction. In the event any portion of this warranty is finally determined unenforceable, that portion shall not be effective and the remainder shall remain effective. This provision shall be governed by and interpreted under the Federal Arbitration Act, 9 U.S.C. §1-16.

THE FOREGOING LIMITED WARRANTY IS HOG SLAT, INC.’S SOLE AND EXCLUSIVE WARRANTY FOR THE PRODUCT AND IS EXPRESSLY GIVEN IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ANY WARRANTY ARISING FROM PERFORMANCE, COURSE OF DEALING OR USAGE OF TRADE AND THERE ARE NO WARANTIES EXTENDED BEYOND THOSE DESCRIBED ON THE FACE HEREOF.

This Warranty is governed by the laws of North Carolina.



Notes:



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This equipment must be installed in accordance with all State and Local Codes and applicable Regulations which should be followed in all cases. Authorities having jurisdiction should be consulted before installations are made.



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**Part Number: HSMANUAL-134 REV A3
Market: Hog
Product Group: Hog Slat**

