



Innovative Equine Systems

Exceptional Equestrian Facility Products and Structures

HINGED STALL DOOR INSTALLATION TIPS

Receiving and Unpacking

Upon arrival of your stalls, please CAREFULLY count all pieces, boxes, crates and steel frames and compare your count with the Packing Slip. We have taken great care to ensure that your order has left our warehouse complete with all parts and hardware you ordered. **IT IS YOUR RESPONSIBILITY TO MAKE SURE THE ORDER IS COMPLETE WHEN IT ARRIVES AT YOUR DESTINATION – PLEASE TAKE THE TIME TO INSPECT THE SHIPMENT WHEN IT ARRIVES AND BEFORE THE TRUCKING COMPANY LEAVES THE PREMISES.** There is no recourse to us or to the trucking company for shortages or damaged goods if the shortage or damage is not noted on the Bill of Lading and signed by the driver **AT THE TIME YOU TAKE POSSESSION OF THE SHIPMENT.** If there is hidden damage - that is, damage not noticed upon receipt of the shipment - it must be reported to us within 10 days of the date shipment is received. Photos of the damage must be taken.

Unpack the steel frames and place them approximately where they are to be installed; for example, set the partitions in between the stall fronts and the stall fronts in the alley.

Wings and Posts

Start with the right wing and the right door post, which will be the hinged side of the door (assuming the door is hinged right). If the door is not hinged right, start with the left wing and the left door post.

Bolt the wing section with the supplied 3/8" hex bolt to the hinge side door post and tighten. This section will now stand up on its own. If you have a wooden post and beam barn, make sure the post is perfectly plumb. You can now attach the wing section to the partition post (usually a wooden 6x6) with the supplied lag bolts and tighten. We recommend using a wooden wedge shim at the bottom to hold the wing up and plumb to the post. The wing section next to the partition post does not touch the ground so it will have to be held up in order to secure the wing to the post.

NOTE: If Innovative Equine Systems is providing the partition post (for a clear span building), use the supplied hex bolts to bolt the wing section to the partition post. This post is usually a 4-1/2" round steel post that is 7'-2" tall.

NOTE: All posts - whether they are partition posts or stall door posts - have rivet nuts already pressed into them, so nuts are not required in these locations. Use the supplied hex bolt.

Attaching Stall Door to Post

Locate the (2) 1" x 3/4" bronze bushings and press them into the holes on the hinge side of the stall front door. You may need to use a hammer as they can be a press fit. Make sure to use a piece of cardboard to protect the powder coating on the side of the post from accidental damage.

Locate the (2) 3/4" off-set cam bolt hinges and loosely bolt the cam using a 3/4" nut and lock washer into the bronze bushing on the stall door post (one top and one bottom). Then carefully (using two people) slide the door onto the hinge side of the stall door post. *NOTE: At this time, do not attempt to open the door, as there are no bolts holding the door up.* Make sure that the door post hinge side is perfectly plumb. If it is not, use a shim (washers make good shims) underneath the door post base. The partition post may not be plumb or the concrete may be irregular; however, it is still important to plumb and level this section carefully by using shims.

Next, bolt the latch door post to the opposite wing using the supplied hex bolts and set this section in place. Set the wing flush up against the partition post, making sure that this is plumb. **DO NOT LAG BOLT THE WING AT THIS TIME**, as you may have to shim this section after determining the door opening tolerance. For aesthetic reasons, you may want to shim the hinge side as well. This will depend on the amount of shimming that is required.

IMPORTANT NOTE: If the partition post is not plumb, you will either need to straighten it or use shims at the partition post and wing prior to securing the wing to the partition post. The doors will not close properly if the wing and door posts are not plumb.

The Latches

Rotate the cam hinge nuts inward (toward the partition) as far as they can go before rotating back again. Then, insert the finger latch into the mortise on the side of the door and secure with two flat-head 1/4" stainless steel allen screws. On the latch side of the door, loosely secure the stainless steel radiused latch plate using two 1/4" stainless steel round-head allen screws in the slots provided. Determine if the door opening (width) is the proper size and within the tolerance of the hinge adjustments.

Make sure the finger latch and the striker plate meet but do not touch so the brass latch bolt fits securely into the striker plate hole. Now, by shimming the wing sections with

long wood strips - if necessary, either one or both sides - shim so the tolerance for the latch is within ¼". Do not worry about adjusting the lateral movement of the latch plate at this time.

Positioning the Posts and Wings

To make your final front-to-back dimension, position the door posts and wings (usually centered on the partition post for post and beam buildings) on the floor by measuring from the exterior wall to the partition side of the wing and then duplicating that measurement at the door post. This will center the door post at the front and parallel with the kick or exterior wall.

Recheck the plumb of all posts, then lag and secure wing sections to the partition post. If the wing sections were not "sucked" into the partition post before tightening the lag bolts on the wings, then the tolerance for the door may now be too wide. You can either re-shim the wing sections or rotate the hinge to make up for the difference.

NOTE: If Innovative Equine Systems has provided you with a 4-1/2' steel partition post for a clear span building, this is the time you bolt the partition (stall divider) to the partition post using hex bolts and then lagging into the kick wall (usually the exterior wall) with supplied lag bolts. If the concrete is not perfectly flat for either the partition post or the door post, you may need to use shims under the post base to make sure these posts are perfectly plumb. Again, large washers will do the trick for shimming.

Once everything is dry set, the posts are plumb and the dimensions from the wall are accurate, use a hammer drill to drill into the concrete at the door posts making sure the holes are at the proper depth. Insert the supplied 4-1/2" red head anchor bolts and hammer them home, securing with a washer and hex nut.

NOTE: Our installations have shown us that by securing the red head anchors and bolting tight and then using a hack saw or, better yet, a power reciprocating hack saw, cut off the excess bolt at the top of the hex nut and then use a power grinder or large file to flatten. This will smooth and clean the top of the hex nut. Then, take the hex nut off, turn it over and retighten or use a new hex nut to resecure the anchor. This will ensure a cleaner and more professional looking installation.

Repeat this process on all the door post holes.

Partitions and Posts

For the wooden post and beam building, set the partition in place and shim where necessary, then lag bolt into the back exterior wall or kick wall, and finally, lag into the partition post - all the time making sure the partition is plumb. Then use a hammer drill to drill proper sized holes, using the provided "drop-in" anchors. Hammer the drop-in anchor to the bottom of the hole with the set tool that is provided. Use the flat-head screws to secure the bottom of the partition to the concrete and tighten.

Lumber

At this time, you should cut your lumber to size and finish with your favorite stain (if using hardwood). We recommend using high UV-rated Penafin clear stain. Using our high density polyethylene (HDPE) lumber will eliminate this step.

The horizontal lumber used in the top and bottom of the stall door and the wing sections is usually HPDE – not tongue and groove – and will need to be ripped to size.

NOTE: The horizontal lumber is secured by using supplied loose plates that match the welded plates on one side of the stall front wings and door. By using the ¼" carriage bolts and acorn nuts on the outside, these plates secure the horizontal lumber both on the wing sections and the larger door plate retainers on the upper part of the stall front door. One of these plates also secures one side of the finger latch.

For the vertical lumber, the length must be cut a little short to fit into the channel as there may be welds or bolts that prevent a tight fit. We recommend cutting about ½" less than the dimensions between the channels. The last boards will need to be ripped and then secured with a supplied 4" plate. Using a ¼" hex bolt, secure the vertical lumber retainer to the outside with the acorn nut.

Adjusting Latches

Adjust the latch by using an allen wrench, adjusting the striker plate laterally so the brass latch bolt just barely drops into the hole. Then secure the striker plate by tightening the allen bolts. Close the door to make sure it closes smoothly and unlatches easily.

Attaching Finials

Lastly, insert the short all-thread bolts into the finials with one ¼" nut and screw onto the post top. There is a hidden plate and bolt that holds the finial onto the post. If the all-thread is not straight up and down, bend it while screwing this down so the inside lip of the finial fits over the outside of the door posts. NOTE: Repeat this if you have partition posts that have been provided.

If you have any questions during your installation, please call our toll-free number at 800-888-9921. Our staff is here to help.