Tuscan
IRON ENTRIES

Installation Manual
2018 Version

Use for:

Tuscan Elite

Tuscan Iron Entries

Thank you for purchasing a Tuscan Iron Entries ornamental iron door. Your new iron door will give you a lifetime of beauty and security with minimal maintenance.

It is highly recommended that a professional be used for this installation. This manual is written assuming that the installer has general construction knowledge as well as some experience in door installation.

PLEASE NOTE THAT EACH AND EVERY DOOR IS PRE-HUNG IN OUR FACTORY TO TEST FOR QUALITY, FIT AND ACCURACY. ALL SEALS HAVE BEEN INSTALLED PRIOR TO SHIPPING AND HAVE BEEN INSPECTED TO ASSURE A TIGHT FIT. IF YOU EXPERIENCE ANY PROBLEMS AFTER INSTALLATION, IT IS OFTEN DUE TO IMPROPER INSTALLATION (SHIMMING, PLUMBING, LEVELING ERRORS).

However, if any problems are experienced before, during or after installation, we are more than happy to offer support. Our contact is 1-800-605-0608 Mon.-Fri. 8:00am-4:00pm.

Installation of an iron door requires some basic tools and supplies. Below is a listing of the essentials.

- Flat head screwdriver
- Phillips head screwdriver
- Hammer
- Pry bar
- Level (48" is recommended)
- Scraper/Chisel
- Saw (circular, sawzall)
- Electric drill with drivers
- Angle grinder with cut blade
- Caulking gun
- Drill bit set
- Utility knife
- Rubber mallet
- Tape measure
- Wood shims
- 5/16" x 2" lag screws
- #10 x 2 1/2" wood screws

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1 Removing your existing door

Removing your existing front door is a crucial first step in beginning the installation of your new iron front door. Care must be taken in these first steps as parts of your old door may need to be preserved for use in your new door. **BEFORE REMOVING YOUR OLD DOOR, DOUBLE CHECK ALL MEASUREMENTS TO ENSURE THAT THE NEW DOOR WILL FIT PROPERLY.**

Remove the door panels:

1. DOUBLE CHECK MEASUREMENTS. For easier handling of your old doors once they are removed, first remove all hardware, blinds, shutters, etc...
2. Using a hammer and a tool such as a small screwdriver or punch, knock out each hinge pin. (Figure 1.1) Make sure someone is close by to help handle the door once all the pins have been removed.

Figure 1.1- Removing pins from existing door.

Remove the casing, trim and jamb:

1. First, remove the interior trim. Using a utility knife, carefully cut along the caulk lines on both sides of the trim. (Figure 1.2)
2. Once the caulking joint has been cut, carefully pry the casing trim away from the jamb and the wall. In most cases, this trim can be reused to trim out the new door. Set aside in a safe place. (Figure 1.3)

Figure 1.2- Cutting caulk between trim and wall.

Figure 1.3- A pry bar works nicely here. Be very careful, though, as this piece of trim will be reused in most cases.

3. Using a electric drill, remove the screws from the hinges in the old door jamb. The jamb cannot be taken out until the hinge screws have been removed. (Figure 1.4)

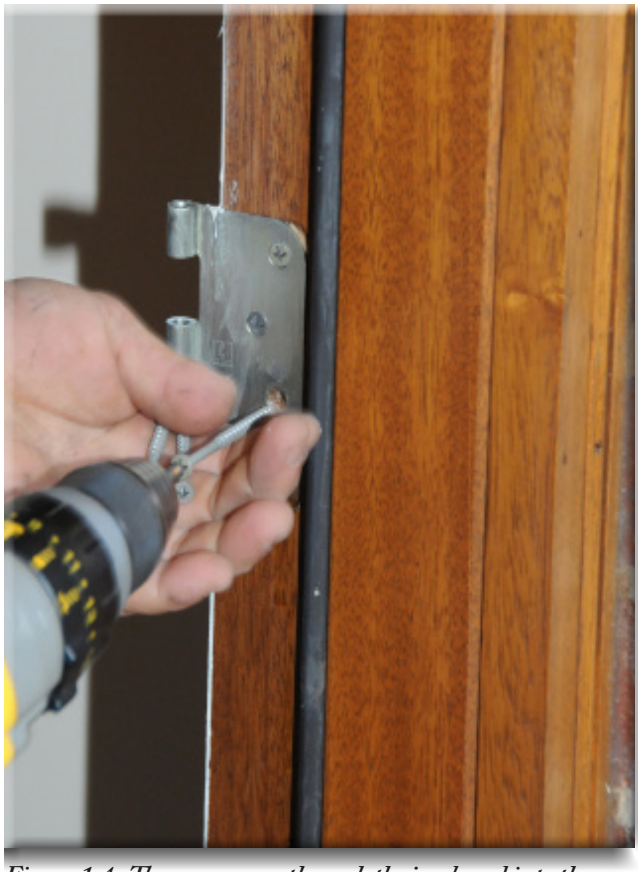

Figure 1.4- These screws go through the jamb and into the surrounding framework. They must be removed before proceeding to the next step.

4. Work can now begin on removing the old jamb and threshold. It is best to remove the threshold first. With the threshold out of the way, it will be easier to remove the jamb. The threshold should be easily removed by using the pry bar. If needed, the threshold can be cut in half to facilitate its removal. (Figure 1.5.1-1.5.2) Next, move on to the jamb. Again, use the pry bar to separate the jamb from the framework of the house. This jamb does not have to be reused. (Figure 1.6) However, the exterior brickmold, if in good condition, can be reused. Pry the jamb away from the brick mold. The brick mold does not have to be removed. (Figure 1.7)

Figure 1.5.1- Break loose the threshold from the concrete. This may take some force as you will be prying against glue and screws.

Figure 1.5.2- Cutting the thershold will help in its removal. A reciprocating saw is ideal for this. A circular saw will work nicely as well.

Figure 1.6- Pry the door jamb loose from the housing framework.

Figure 1.7- If the brick mold is in good condition, leave it. It can be painted to match the door.

5. Now that the threshold is out of the way and the jamb is pried loose, begin to remove all pieces of the jamb. (Figure 1.8) Take special care of any alarm wiring that is present. (Figure 1.9) The alarm contact will have to be disconnected and passed through the new iron door jamb. An alarm technician may be needed for this step.
6. Before moving onto door installation, clean up all surfaces now exposed from the removal of the threshold and the door jamb. Clean all caulking and adhesive from the concrete. Remove any nails sticking out from the housing framework. (Figure 1.10)

Figure 1.8- The jamb components are being removed while preserving the exterior brick mold.

Figure 1.9- The alarm contact wire needs to be disconnected and installed in the new jamb.

Figure 1.10- Clean the surfaces that are now exposed from the removal of the old door. A 5 in 1 scraper works well here.

2 Installing your new iron door

Now that you have removed your existing door, it is time to begin work on the new installation. If you have ever installed a set of doors before, you will find this installation to be easy. Although installing an iron door is different from installing a wood one, many of the same principles such as plumbing, leveling, squaring and shimming apply.

Rough installation of jamb

1. Orient the jamb so that the jamb mounting brackets (flat plates with holes welded to the jamb) will face towards the inside of the house.
2. Stand the jamb up and move into the door opening. Move the jamb all the way into the opening until the mounting plates touch the wall. Using a level, make sure that the jamb is sitting level and plumb.(Figure 2.1) Using a sharpie or a pencil trace along tabs so that you can mark their position on the wall. Your tracing should be 1/2" larger than the tabs all the way around. This will allow for some adjustment room later. (Figure 2.2)
3. Mark the location of the jamb at which the alarm contact wire should pass. You will need to drill a hole in the jamb at this location before it is installed.
4. Take out door jamb and place to the side.
5. Using a utility knife, remove the wall board that you just marked. The wallboard should be completely removed so that the studs are completely exposed. The jamb mounting plates will need to be in direct contact with the studs. (Figure 2.3)
6. Before installing the jamb, you must drill a hole for the alarm contact. (Figure 2.4.1) Since alarm contacts vary, you will need to check the specifications of your contact so that you can drill the correct sized hole.
7. Before sliding the jamb into position, apply a sub-

Figure 2.1- Once the jamb is in place, it needs to be plumbed and leveled. If floor is not level, you may need to use shims on the low side.

Figure 2.2- Trace the tab out about 1/2" more all the way around. Be careful not to mark beyond the old caulk line. You do not want to remove the wallboard beyond that line. If you do, the trimwork will not cover it up completely.

Figure 2.3- Make several passes through the wall board with the utility knife. Alternatively, you may want to use a router for this step. Just be careful not to remove any material from the studs.

floor adhesive at the location the threshold will occupy. This will seal the threshold to the floor. (Figure 2.4.2)

8. Stand the jamb back up and move it into location. Before sliding the jamb back into position, pass the alarm contact wire through the hole you drilled in the previous step. Once you have done this, position the jamb all the way in to the door frame so that the jamb mounting plates make contact with the studs that were exposed when you removed the wall board. (Figure 2.5) Again, as you did earlier, level and plumb the door jamb. (Figure 2.6)

Figure 2.4.2- Apply pressure along the length of the threshold to complete the seal of the threshold to the floor.

9. Once the jamb is level and plumb, you may secure it using four lag screws. Only screw in four of the brackets. Secure the lower two and upper two brackets on the jamb sides. Do not secure the brackets on the top of the jamb. These will be secured later once the door is completely adjusted. (Figure 2.7.1-2.7.2)

Figure 2.4.1- Position the hole for the alarm contact so that it is towards the center of jamb space that will be occupied by the active door.

Figure 2.5- Tab should sit against studs.

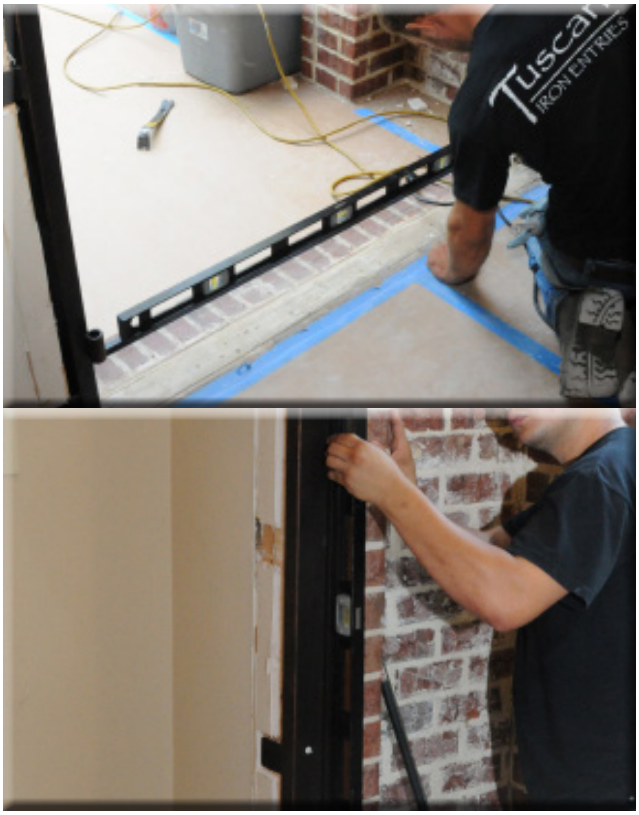

Figure 2.6- This step is crucial. It is important to get the jamb as level and plumb as possible. This will lessen how much shimming will have to be done later.

Figure 2.7.1- Secure the jamb with 5/16" x 3" lag screw at the bottom first.

Figure 2.7.2- Screw in the top side brackets. Only four screws will be used to hold up the jamb until door is fully adjusted.

Door Panel Installation

1. With the jamb installed, it is time to install the door panels. To install the door panel, you will need a 2 1/2" tall block. This block is to rest the door on as you stand it up into position. (Figure 2.8)

Figure 2.8- The block will help keep the door at the correct level while you are trying to set the hinge pins.

2. The hinge is made up of five parts. There are two barrels. Once barrel is welded to the door and the other is welded to the jamb. There is a hinge bearing that goes between the barrels. A solid 3/4" hinge pin holds the barrels together and hinge nut finishes off the bottom of the hinge. Once the door is standing on the block, slide it carefully into position so that the hinge barrels on the door are resting directly above the hinge barrels on the jamb. There should be 3/8" - 1/2" of space between the barrels. (Figure 2.9)

Figure 2.9- The door hinge barrel is directly above the jamb hinge barrel. There is a space of about 1/2" which will allow for placement of the washer.

3. Now that the barrels are above one another, carefully place the hinge bearing on top of the jamb hinge barrel. (Figure 2.10) The hinge bearing can rest there until the hinge pin is in place. If need be, a piece of tape can be used to hold the washer in place.

Figure 2.10- The hinge bearing must be installed at this step. The door will not align properly without it.

4. The hinge pins can now be inserted. Apply an even coat of white lithium grease to each hinge pin. They may be a bit tight. A rubber mallet works well to seat the hinge pins. (Figure 2.11)

Figure 2.11- The hinge pins may need some help seating. A rubber mallet will apply enough force without damaging the paint.

5. Shimming- THIS DOOR WILL SHIM! THIS STEP IS POTENTIALLY ONE OF THE MOST CRITICAL STEPS IN ASSURING A GOOD INSTALLATION. IF NOT DONE PROPERLY, THE DOOR WILL LIKELY LEAK AIR AND HAVE A GREATER CHANCE OF SWEATING. SPEND TIME ON THIS STEP. The doors are hanging, but they are not likely to be perfect. Shimming is now necessary to line the doors up across the top and to remove any twists in the jamb. The jamb may be twisted as a result of the house framing being slightly out of plumb. Shimming can fix this. If there is any twist in the doors, shims can be placed between the mounting brackets and the frame of the house. Loosening of the lag screws may be necessary to get the frame to move. Proper shimming will at the appropriate locations will remove the twist. If the doors do not line up at

Figure 2.12.1-These doors do not quite line up at top. The right door is slightly lower than the left door. Shimming at the lower right of the door should push the right door up.

Figure 2.12.2- Loosen the lag screw a bit so that the door jamb can move when you are driving in the shims.

Figure 2.12.3- Keep working on the shimming. The door will eventually line up.

top, shimming between the door jamb and house frame will be required. This step may take some time and some trial and error. Keep working with it and the doors will line up. (Figure 2.12.1-2.12.3)

6. Now that the doors are hanging nicely, finish attaching the jamb to the frame of the house. Make sure all brackets are bolted securely to the studs.
7. Test the doors to make sure they open and close and latch properly. If there are issues, you may need to do some fine tuning with the shims.

Figure 2.13- Expanding foam such as Great Stuff is perfect for sealing the gap between the jamb and the studs.

8. Before replacing the inside trimwork, you need to inject expanding foam between the door jamb and the frame of the house. This will seal and insulate the airspace around the jamb. (Figure 2.13)
9. The interior trim work can now be replaced. If desired, paint the trim to match the door before you re-install it.

Hardware Installation

Before moving on the the next step, you may want to install the hardware now. It will help when you begin adjusting the door as you install the threshold and the sweeps. Follow the manufacturer's installation instructions supplied with the hardware.

Threshold and Sweep Installation

1. The threshold has been pre-installed at the factory. It has already been glued down in a previous step in this installation. For addtional strength, the threshold should be screwed to the floor at this point. Remove the screws from the adjustable riser on the threshold. Loosen each screw a little at a time until they all are out. Remove the adjustable riser and set to the side. Using an electric drill, set the threshold by driving 2" wood screws through the threshold into the subfloor every 8"-10". Replace the threshold riser in reverse of how you removed it. (Figures 2.14.1-2.14.2)

Figure 2.14.1- Loosen each screw a little at a time so as not to damage the riser of the threshold.

Figure 2.14.2- Secure the threshold using 2" wood screws.

2. Now that the threshold is secured, you can drill holes for the flush bolts. The flush bolt are mounted within the t-astragal on the inactive door. Close the inactive door. First mark the top hole. Push the top flush bolt up until it makes contact with the door jamb. Standing on a ladder, put pressure against the inactive door so that the weather-stripping is compressed. With pressure applied, mark the location of the flush bolt. Drill a 3/8" hole in the jamb to accept the top flush bolt. Once the hole is drilled, push the upper flush bolt into position. Now for the bottom hole. Lower the bottom flush bolt until it contacts the threshold riser. Put your weight against the door as you mark the location of the lower hole. It is very important to make sure the inactive door is tight against the weatherstrip. If the door is not tight enough, air can leak around the seals. This step will assure that both doors will have a tight fit against the weather seals. Drill the bottom hole. (Figures 2.15.1-2.15.2)
3. Sweeps can now be installed. Sweeps must be

Figure 2.15.1- Make sure to apply pressure to the door while marking the top flush bolt position.

Figure 2.15.2- Make sure to apply pressure to the door while marking the bottom flush bolt position. You want this to be a tight fit so that the door seals properly.

Figure 2.16- Use acrylic caulk instead of silicone here. It will be easier to adjust the sweep in the future if needed.

field cut to fit to assure optimal fit. Notch the drip cap of the sweep to fit around the stop bars on the jamb. Apply a bead of caulk to the sweep. (Figure 2.16)

4. Fit the sweep onto the bottom of the door. Slide it down until the rubber blades make contact with the threshold riser. After contact is made, slide the sweep down 1/4" inch more so the rubber blades will make a good seal against the riser. (Figure 2.17)
5. Finally, using an electric drill and self-tapping screws, attach the sweep to the door.
6. Repeat steps 8-10 for the second sweep.

Figure 2.17- The sweep is in place. The caulk can easily be cleaned off the door.

3 Finishing touches

Your new door is now installed and adjusted properly. At this point, your door should be swinging freely and closing tightly. It is now time for the finishing touches.

Caulking

1. Use fast drying acrylic caulk if possible. This will allow you to do the touch up painting sooner. On the interior trim, run beads of caulk between the trim and the wall and between the trim and the jamb. (Figure 3.1)

Figure 3.1- Using white caulk is okay. You will be painting it to match the door.

2. Next, caulk the exterior of the door between the brickmold and the door jamb. (Figure 3.2)

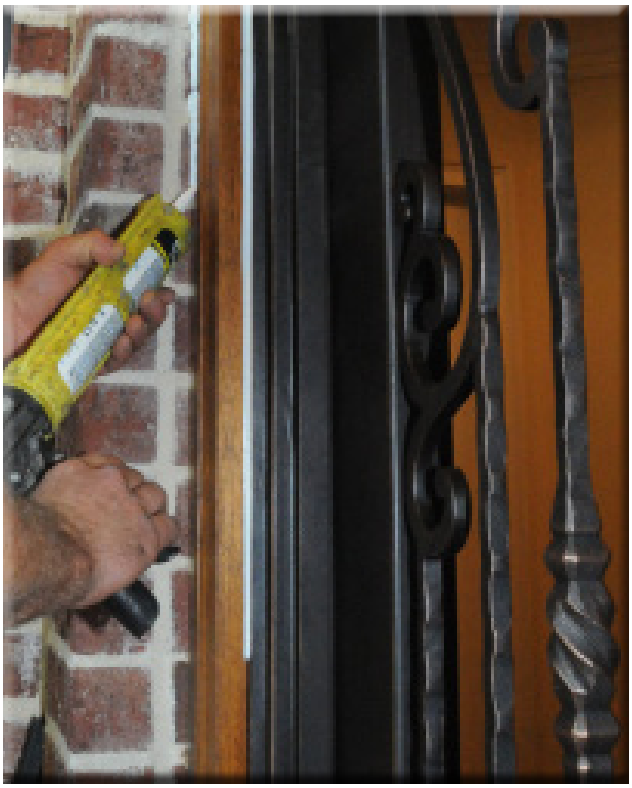

Figure 3.2- Caulk between the brickmold and the door jamb.

Paint touch up

1. If there are any scratches on the door, smooth them out by lightly sanding with 220 grit sandpaper.
2. Using black spray paint touch up the areas that you sanded, caulked, the brickmold, screw heads and any other place that needs the black base color.
3. Next is the antiquing. The best brush to use for this process is a 3" x 1" deck brush with natural bristles. The technique is not difficult but may take some practice. See the following figures for explanation. (Figure 3.3.1-3.3.3)

Figure 3.3.1- Dip the brush into the antiquing paint. You do not need much paint on the brush.

Figure 3.3.2- Remove as much paint as possible by wiping the brush onto a shop towel. This is a dry brush technique.

Figure 3.3.3- Using a swirling motion, lightly apply the paint to the surface. If you make a mistake, don't worry, you can paint over it with black and start over.

4. If you want to apply highlights, you can do so in much of the same way you applied the antiquing paint. There are a few differences, though. Use a smaller brush such as a 2" chip brush. The application is also done differently. Instead of swirling, you will just lightly brush across the areas you would like to highlight. (Figure 3.4)

Figure 3.4- With a smaller brush and the same "dry brush" technique, lightly brush across the surfaces you want to stand out.