



**GROWER'S**  
S O L U T I O N

# Dakota Instruction Manual

**Before assembling your greenhouse please read all instructions, while watching the instructional video.**

**This manual includes instructions for ALL add-ons that you can purchase with your greenhouse.**

**For additional assistance call 1(866)928-3390**

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# DAKOTA GREENHOUSE INSTRUCTIONS

**!!!! CAUTION: Tubing ends may be sharp!!!!**

## Step 1 – Ensure all components are accounted for.

- Lay out all bundles and open all boxes to compare labeled pieces to the packing sheet you received.
- Check for any concealed damage or missing components, please, contact us immediately if either is discovered

## Step 2 - Squaring Greenhouse

- Begin by choosing fairly level ground, or if needed by leveling the site in preparation.
- Use the "How to Square your green house" worksheet included to determine the measurement to square your particular greenhouse.
- Set the first two ground stakes by measuring your width outside to outside of the ground stake.
- Use levels to keep ground stake plum when driving.
- When pulling the length and diagonal measurement, set the last two ground stakes on the inside of where the two tapes meet. **Figure 2.1**



**Figure 2.1**

## Step 3 - Ground Stakes

- Standard depth of ground stake is **18"**.
- Measure **6"** on the four corner stakes once you have squared them. **Figure 3.1**
- Tie a string to the pipe and run it around the exterior at your marks, ensuring the line is tight.
- Mark the ground every **4'** on center below the line.
- Drive remaining stakes on your **4'** marks, ensure the stakes just touch the string and plum side to side.
- Once all the stakes are driven to depth, mark all stakes at the height of the line and cut off the excess material.
- **Once the ground stakes are set and trimmed it is advised to drill a 1/8th hole near ground level to allow moisture out to avoid the stake splitting.**



**Figure 3.1**

## Step 4 - Bows

- Place the bow pieces on a relatively flat area. **Figure 4.1**
- The **8'**, **10'**, and **12'** kits have a three piece bow, all three pieces have a bend. The **16'**, and **20'** kits have a five piece bow two of which are straight pieces, two straight pieces go between the peak and sidewall pieces. Insert the swedged (crimped) end into the saw cut end. Connect at the joint with 2 tek screws; ensure the screws are driven so that they will not snag the film as it goes over the top. **Figure 4.2**
- Stand the bow upright and insert into the ground stake.



**Figure 4.1**



**Figure 4.2**

## Step 4 - Bows continued

- Secure in the ground stake with 2 tek screws per joint.
- Ensure on the first and last bow that the tek screws are underneath the bows, facing the inside of the green house.



Fig 5.1

## Step 5 - Purlin

- **\*\* All Dakota houses get 3 runs of purlin, the additional 2 mounted at 10 and 2 o'clock.\*\***
- Test fit the purlin on the inside of the ground stakes from first to last. Lay flush to the outside of the first ground stake ( not protruding past the end). Mark your purlin at the center of each ground stake. **Fig 5.1**
- Assemble 2 pieces of purlin at a time. Using 2 tek screws per joint.
- Start hanging the purlin by using the 1" two-hole strap to suspend the pipe from first bow. Drive an additional tek screw through the center of the two-hole strap directly to the purlin. **Figure 5.2**
- When installing, align the bow with the reference mark on the purlin. Use the purlin clamps on all interior bows. Drive a tek screw through the clamp to the bow to keep it in place. **Figure 5.3**
- Once the purlin is assembled and suspended, cut any excess pipe flush with the first and last bow.



Figure 5.2

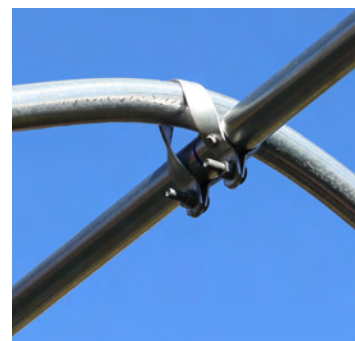


Figure 5.3

## Step 6- Base and Head Boards

- 2"x6"x16' pressure treated lumber is suggested. (Not included in kit)
- Line the lumber down the exterior of the green house, beginning flush with the first bow.
- Trim where necessary to ensure the ends meet at the ground stake. **Figure 6.1** Cut excess board flush with the last ground-stake. **Figure 6.2**
- Begin with head board by ensuring the bottom of the board is 42" from the top of the ground stake.
- Mount timbers with corner bracket to first and last ground stake. **Figure 6.3**  
Use the 1" two hole straps to attach to the ground stake for all others. Drive a tek screw through the two hole strap to secure to stake. **Figure 6.4**
- Repeat the test fitting and trimming for the base boards.
- To ensure even spacing, measure the vertical gap between the head and base board on first stake. Use this measurement down the length of the house.

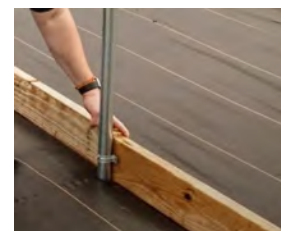


Figure 6.1



Figure 6.2

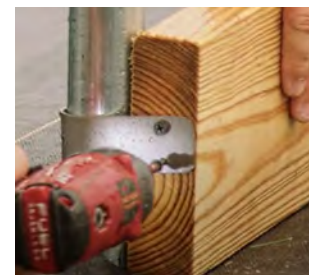


Figure 6.3



Figure 6.4

**\*\* Note: Refer to End Wall Instructions for the end wall base boards.\*\***

## Step 7 -Truss and Gusset **Only on 16' kits.**

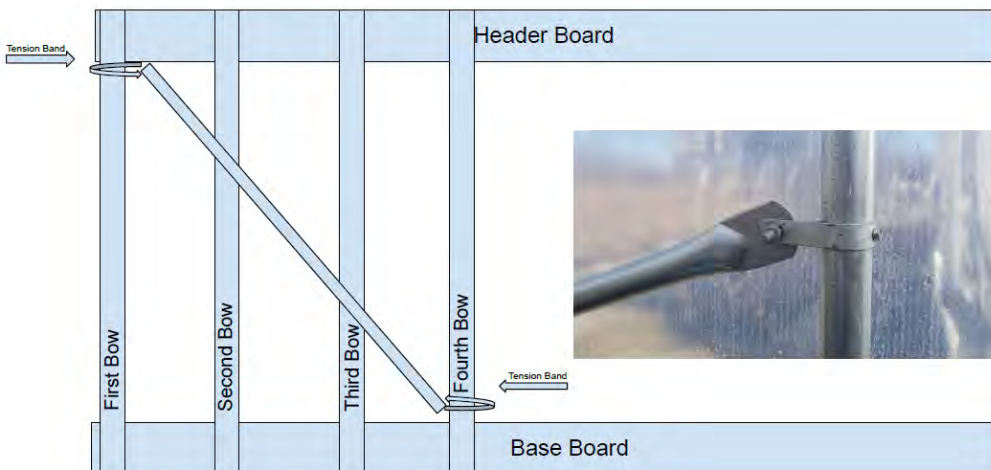
- All truss and gusset mounting is done with tension bands. Be sure to secure the bands with a tek screw through the band into the bow material.
- For the gusset bracing measure **52" for the 16' house, 42" for the 20' house**, from the top of the groundstake up the side wall. Mount one end of the gusset at that point using a tension band. The other end of your gusset will attach to the peak side of the bow, measurement is not important here as the gusset is a fixed length.
- Next mount the truss with tension bands on both sides of the peak.
- Again, as the truss is a fixed length, exact measurement is not of concern. Ensuring the truss is level will be the most important part.
- **20' kits have two additional truss braces.** Measure **50"** from each end of the truss for your mounting location. These will mount diagonally from the truss to either side of the peak at an outward angle.



## Step 8 – End Walls

- Refer to Endwall Section of this manual.

## **WIND BRACING for 40' or Longer Houses**



## Step 9 – Wire Lock

- Lay your wire base down the length of the house.
- By using either a 1/8" drill bit or tekscrew, pre-drill the aluminum base for the wood screws.
- Start the wire base 1 1/2" in from the end of the board. This leaves room for the base that goes over the first and last bow. **Figure 7.1**
- Mount the top of the base flush with the top of the head board.
- To mount the base to the end bows start by pre-drilling only the sections that attach on the head boards.
- Overlap the base on the head board. Slowly bend the base over the board and secure to the bow and the ground stake with tekscrews every 18". **Figure 7.2**
- Repeat on opposite side so that the base meets in the middle of the bow.



Figure 7.1



Figure 7.2

## Step 10 – Film Installation

**Only for 16' and 20' kits.**

**•Install Hoop Felt on all bows prior to film installation (EXCEPT FOR THE FIRST AND LAST BOW). Cut felt in approximately 24" length. Apply directly to bow on peak and corners.**

- Be aware of the wind when preparing to install film on your green house. Try to pick a mild weather day.
- Locate the film for the ends of the green house. Next gather 3 pieces of wiggle wire ( you will use these to hold film in place).
- Stretch the end film over the first and last bow and attach the film using the wire. You can adjust the film by removing wiggle wire and reinstalling.
- Roll the main film out along the length of the green house. Pull the film across the house and attach on one end. Go to other end and pull tight. You may need to go back and adjust again. Once in place secure with wiggle wire entirely.

**NOTE:** Plastic film normally has a **12"** or larger overhang on all sides.

# DAKOTA END WALL INSTRUCTIONS

Your end wall uprights may require trimming for proper fit due to the unknown grade of your land.

**These instructions are for a 36" storm door and rough in for door is 36.5", for any other sized doors adjust your measurements accordingly.**

## 36" Door

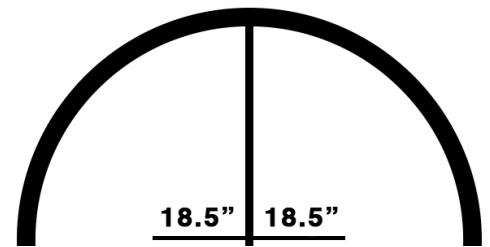
- The number of uprights on the size of the house you purchase includes door frame uprights. This is for 36" door opening. (**Table A**)

8 ft. to 16 ft.	20 ft.
2 uprights	4 uprights

**Table A**

## Step 1

- On the front end wall, measure to find the center of the house. (**Figure 2.1**)



**Figure 2.1**

## Step 2

- From the center, mark 18.5" to the left and right of that point. This gives you the door frame size. (**Fig 2.1**)

## Step 3

- Drive a 1" ground stake in each of these two points. This is where your storm door will be. (**Figure 3.1**)



**Figure 3.1**

## Step 4 - THIS STEP IS ONLY FOR 20' DAKOTA GREENHOUSE

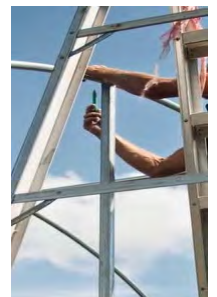
- From that point if you have another upright measure 48" over and drive another 1" ground stake. (**Fig 4.1**)



**Figure 4.1**

## Step 5

- Measure the distance between the base of these ground stakes and peak of the bow where they will be connecting (**Fig 5.1**).



**Figure 5.1**

## Step 6

- If needed cut your square uprights to meet these measurements. Slide square uprights over the ground stakes with pre-drilled side at the top. (**Fig 6.1**)

## Step 7

- Attach tension bands over the bow and into the square uprights (**Figure 7.1**).



**Figure 7.1**



**Figure 6.1**

## Step 8

- Insert bolts through tension bands and square upright; (tighten completely after the door is installed). **(Fig 8.1)**



**Figure 8.1**

## Step 9

- On the inside of the house place one self-tapping tek screw through the tension band securing it to the bow. **(Fig 9.1)**.



**Figure 9.1**

## Step 10 - ONLY ON 20' DAKOTA GREENHOUSE

- You may install end braces at 60” **(Fig 10.1)**.



**Figure 10.1**

## Step 11

- Using tek screws, install header with corner braces. **(Fig 11.1)**



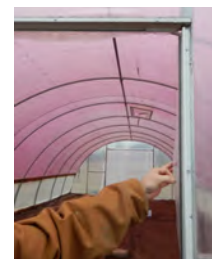
**Figure 11.1**

## Step 12

- Follow previous steps for the second end wall. However, header & upright spacing can be adjusted to accommodate a fan or vent if you choose to install one.

## Step 13

- Do not install door header for storm door until door is in place. When using a storm door you will use the frame of the door to seal the end film. **(Fig 13.1)** Cut the film opening and place a 2"x4" face down in the opening. Pull the cut film towards the inside of the greenhouse. Set the door in the opening and secure with a couple tek screws just to hold it in position. Remove the 2"x4" from under the door and check the operation. If the door opens freely then finish installing tek screws. Install the door header and trim film around the opening.



**Figure 13.1**

## Step 14

- Install baseboards. You should measure from the corner stake to first metal upright. Then cut the board to fit, using the L bracket. **(Fig 14.1)**. Continue to install using same method, measuring in between uprights and cutting to fit.



**Figure 14.1**

# ROLL UP SIDE INSTRUCTIONS

## Step 1

- After you have the film secured in the wire-lock, take the 1 3/8" bottom pipe that is used to roll the film up on. Slide and secure together ( **Fig 1.1**) with two tek screws.



Figure 1.1

## Step 2

- Lay pipe on top of bottom board and attach the bottom pipe clamps ( **Fig 2.1**). Snap them evenly spaced along the pipe making sure that you have the film snug at the base.

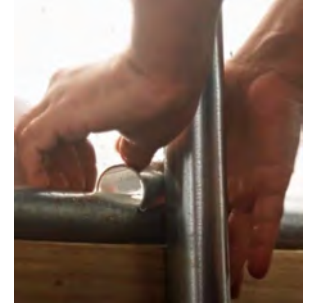


Figure 2.1

## Step 3

- Now take the black strapping and mount to head board and base board at each bow / ground stake ( **Fig 3.4**). Make sure to pull strapping tightly ( **Fig 3.3**) from the head board to the base board. Be sure to double fold ends of strapping ( **Fig 3.2**) where screw goes through . Use the fender washer to reinforce strapping so it will not pull through ( **Fig 3.1**).  
**NOTE:** Pipe should stick out 1' from end-wall ( **Fig 3.5**).

**\*\*WHEN ROLL UP SIDES ARE DOWN YOU MUST WIRE THE ENDS SHUT.\*\***



Figure 3.4



Figure 3.3

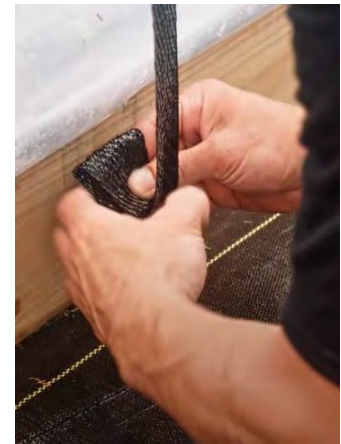


Figure 3.2



Figure 3.1



Fig 3.5



## Step 4

# SPIN HANDLE INSTRUCTIONS

## Step 1

- Slip small sleeve over the bolt. (**Fig 1.1**)

Figure 1.1



## Step 2

- Slip large sleeve over small sleeve on bolt.

## Step 3

- Insert thru pre-drilled hole. Attach nut and tighten. (**Fig 3.1**)



Figure 3.1



Figure 5.1

## Step 5

- Insert the handles into the end of the roll up pipes with the handles laying towards the center of the greenhouse. Secure with two tek screws. **Fig 5.1**



Figure 6.1

## Step 6

- To hold up your side use a piece of strapping on each end and loop under the handle and secure to the greenhouse (**Fig 6.1**).

During cold weather, remember that you will just roll the sidewalls down and the weight of the pipe sitting on top of the bottom board and the strapping will hold the film firmly in place.

# WIND STRAPPING INSTRUCTIONS

## Step 1

- The best way to throw your wind strapping over the green house is to use a water bottle or soda bottle filled with water. It will not puncture or cut your film. Simply tie strapping onto the bottle (**Fig 1.1**) and throw over the greenhouse.

## Step 2

- Place wind strapping between the first and second bow and then between the next to last and the last bow. With the remaining wind strapping equally space your strapping the length of your green house. Strapping should be placed between the hoops. (**Fig. 2.1**)



Figure 1.1



Figure 2.1

**Note: Strapping is only required every other bow.**

## Step 3

- When attaching strapping to your base or head board, fold over twice for strength (**Fig 3.1**). Use a washer and wood screw to attach (**Fig 3.2**).



Figure 3.1



Figure 3.2

**Please feel free to call us with additional questions, 866.928.3390.**

### **Additional Information Concerning Weather**

During windy, stormy, or winter conditions it is mandatory to roll sides down and wire lock ends. If you fail to do this, it may result in greenhouse damage due to wind uplift. If you are expecting severe snow (4" plus) you should brush snow off of the greenhouse. Feel free to call for more explanation, 866-928-3390.

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