

Cocoon Pro: Steel Frame End Wall Notes

The Steel Framed End Wall Kits are easy to install when set up in a few steps during the tunnel build and can easily be retrofitted to any of our Cocoon Tunnels.

The end walls attach to the hoops using the same brace bands as used on the wind bracing. In addition the Door Stay poles sit on footing rods, as per the hoops.

The following notes are in the order;

- 1, End Wall components
- 2, Required Tools and then,
- 3, Setting Up; construction steps to follow.

Each End Wall comprises:

A: Header (bracing) Pole x 1; used as the hanging point for the Door Stays

- 1 x 35mm x 2.95m bracing with each end flattened and drilled for attaching a Brace Band
- 2 x 35mm Brace Bands

B: Door Stays x 2 (aka door jams)

- 2 x 35mm x 2.1m door stays, each with one end cut (soil end) and the other (top) end flattened and drilled to attach to the Header Pole using a brace band
- 2 x 16mm x 1m footing rods, to be positioned to your required opening diameter

C: Telescopic Base Poles x 4 (2 each side of Door Stay at soil level)

- 2 x 35mm x 950mm poles, each with one flattened and drilled end and one cut end (to slide over the 31.8mm poles)
- 2 x 31.8mm x 950mm poles, each with one flattened and drilled end and one cut end, (to slide into the 35mm poles)
- 2 x Tek Screws, to secure the required diameter of the base poles
- 4 x 35mm brace bands, two for attaching each telescopic base pole pair at either end, (at the base of the hoop and at the base of the door stay)

D: Door Frame x 1

- Adjustable galvanised steel frame door, including fittings. 700mm-1200mm w x 1860mm h.

E: Locking Channel and wiggle wires

- Either 6 x 3m or 12 x 1.5m Aluminium locking channel to attach to base poles, door stays and header section above door stays
- 13 x 2.1m blue wiggle wires, to secure end wall film to channel
- 40 x Tek screws, to attach the channel to the end wall frame and door

Required Tools:

- Step ladder
- 12mm spanners x 2, alternatively; socket/ ratchet set
- 2 x sets of pliers, preferably at least 1 x long nose for opening brace bands and cutting wiggle wire
- Side cutters for cutting wiggle wire (good option)
- Spirit level
- Builder's Tee (Square), optional
- Cordless drill
- 3/8 Hex head driver for Tek Screws- Provided
- Star picket slammer, blockbuster type axe or similar to insert footing rods to 700mm in soil
- Star picket remover, in case you need to reset the position of footing rods (optional)
- Tape measure (optional)
- Marker pen, for making cutting marks on the aluminium locking channel and end wall film
- Angle grinder with cut-off wheel, hacksaw or a battery powered multi-tool for cutting the locking channel
- Sharp scissors or shears for cutting film
- A good willing friend:)

Setting Up:

A: Attach Brace Bands to the first and last hoops*;

Each of the tunnel's end hoops required six brace bands to be fitted. This comprises of two for the header brace, two for wind bracing and two for the telescopic base poles

1. You will need to slightly open the brace bands to slide onto the end of the hoops (at ground level). The easiest way to open (splay) them is with two pairs of pliers or two open end spanners to slot into each bolt hole and lever apart.
2. Slide three of the six brace bands onto either side of your end hoops.

Roughly position the brace bands;

1. move two brace bands up to the header height, approx 2.1m
2. position two brace bands at about 1.3m for the wind bracing
3. position two brace bands at the base for the telescopic base poles.

**NOTE- This step must occur before attaching the large tunnel film to the end hoops with Locking Channel.*

- *Your Pro series Tunnel comes with Locking Channel to attach the tunnel film to the end hoops.*
- *After Step A is completed you can attach the Locking Channel as per the Farmer's Friend video and attach the tunnel film.*
- **The Locking Channel can take more than one layer of film and wiggle wire and you will use a second layer of Wiggle Wire (provided with the end wall kit) to fit the end wall film onto the hoop section after the large tunnel film has already been fixed into the channel.*

B: Attach the Header Pole:

1. Fit 2 brace bands onto the Header Pole, to be positioned later for the door stays
2. Attach one end of the Header Pole to top brace band on your end hoop (at approx 2.1m height)

3. Attach the other end to the opposing brace band, your Header Pole should now be in a roughly horizontal position.
4. Use a spirit level to make sure the Header Pole is level for your door option.
5. Tighten the Brace Bands,

NOTE; Brace Bands do NOT require full closure to work. Just tighten until the spanner is tight. Your brace band will be secure at this point.

C (Part 1): Setting your Door Stay opening diameter;

Choose your doorway width depending on how you want to attach a door. There are numerous options. We don't supply a door or hinges or sliding rail. You may choose a simple flap or a sliding door that fits internally or externally. Things to consider may be whether the door will measure to the outer length of the Door Stays or sit within the Door Stays, such as a hinged gate. (See 'C part 2' under the next step)

1. Position your Door Stay Footing Rods; using a string with a weighted end hung/tied to the Header Pole, locate the position for the Footing Rod to be hammered into the ground directly below the Header pole with the rod's side that is facing the tunnel's centre sitting at your inner door stay measurement.
2. Hammer the 1m footing rod vertically into the ground to a depth of 700mm leaving 300mm above (as per hoop footing rods) this depth is not as critical as with hoop rods but this is an ideal depth)
3. Place a brace band onto the bottom end of each door stay before sliding the Door Stays into position onto the footing rods
4. Attach the top of the Door Stays to the brace bands on the Header Pole.

NOTE; Wait until you have attached the Telescopic Base Poles before tightening off the brace bands in order to set the correct 90 degree right angle for your doorway

D: Assembling and fitting the Telescopic Base Poles;

The Telescopic Base Poles sit at ground level, positioned from the base of the Door Stay to the base of the hoop, forming the bottom of your end wall. One complete pole is made of two sliding sections, allowing adjustment to your required width.

For each side;

1. Slide the narrower 31mm diameter pole into the 35mm pole, if there is a resistance from air pressure drill a small hole at the end of one of the pipes close to the flattened end to release that pressure. (Hack- you could use a Tek screw to make the hole)
2. Connect one end of the base pole to the Brace Band that you previously positioned on the HOOP BASE
3. Adjust the Telescopic length to join to the other Brace Band positioned at the base of the DOOR STAY
4. Set the Telescopic Base Pole length.

NOTE; Pull the Door Stay Pole's side hard up to the internal Footing Rod and using a Tek screw fix the Telescopic Base Pole as a point where they overlap, this will stop any sideways movement of your Door Stay

C (Part 2): Setting your Door Stay opening diameter- [Setting the tops of your Door Stays;]

After completing step D you can tighten the brace bands on the Header Pole.

1. Use a spirit level to ensure the Door Stays are vertical (so that you are achieving a 90 degree angle at the Header Pole)
Tighten the brace bands.

E: Attach the Aluminium Locking Channel;

At this stage you will need a marker pen, tape measure and cutting device such as a hacksaw or angle grinder, a battery powered multi-tool will also suffice to cut the channel. To cut the Blue Wiggle Wires you will need strong pliers or side cutters.

End Hoop Outer Edge - The channel is designed to bend or shape to the outer curve of the hoop

To start, attach your locking channel from the outer surface of the end hoop at ground level.

1. Either hand hold, use adhesive tape or tie your channel's end to the base of the hoop
2. Add your first Tek screw 40mm-100mm above the start of the channel, using the central channel groove to position the Tek screw
3. Add additional Tek screws every 300mm-500mm, making sure to re-centre your channel on the hoop surface and avoid joining within 50mm of any brace bands or fitting joins, eg insert kit
4. Tightening in the end of your channel, attaching the end of the channel can be made easier by using rope, a belt or similar to pull in the channel.. Once aligned add a Tek screw up to 40mm from the end, then add the next channel length, cutting excess off the last length.

NOTE:

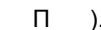
- *Tek Screws can be set back up to 10cm from the ends of the Channel. Don't screw through flattened pole ends or brace bands.*
- *Never over tighten Tek Screws otherwise it will weaken the connection, tighten just until surface contact is made.*

End Wall Front Edge

1. Mark the length of Channel required for each section and cut with an appropriate tool.

NOTE: Small gaps between the joins of the channel eg, 1- 4cm are acceptable. When attaching the film the wiggle wire will span the gap. Using this technique will enable you to attach the Wiggle Wire without cutting it to go around a corner eg, in the doorway.

1. Attach as in step E.2; Add your first Tek screw 40mm-100mm from the start of the channel, using the central channel groove to position the Tek screw
 2. You don't need to attach to the full length of the Header Pole, only above the door access
- **Retrofitting a Cocoon Pro with existing Locking Channel on end hoops:**

As you already have the channel fitted to the outer edge of the end hoop you will only need to attach the Aluminium Locking Channel to the outward facing edges of the front wall door frame and base poles, (positioned as such ).

F: Attaching the End Wall film with blue Wiggle Wire;

Your tunnel film roll has sufficient excess film to cover both end walls.

1. You will need a single piece measuring 3 metres high by 5.2 metres wide as a minimum. This size will allow the excess to be cut off after installation.
2. Mark your film and cut to size using scissors or a sharp knife.
3. Attach each side: Using the Wiggle Wires as per the Farmer's Friend video start attaching by stretching to either side of the hoop base, leaving about 15cm of excess at ground level.
4. Lift up to the tunnel's peak and temporarily join by using a few 'wiggles' of the blue wire to hold it.
5. Return to the base and fit the film at ground level.
6. Starting from one side, attach the Wiggle Wire up the edge of the hoop while pulling the excess taut.
7. When you reach the peak remove the temporary wire and continue to ground level on the other side, cutting off any excess Wiggle Wire

8. The End Wall face should now be taut and it is time to add the Wire to the doorway
9. Next you can cut the inner opening of your doorway using the knife or scissors. You can choose how little or much excess film to leave however a few (2-3cm) could be a good minimum.

G: Troubleshooting: Phone a Friend!

Please let me know if you require any guidance with the construction and we can talk through it on the phone. My number is 0427995867. If I don't answer, text me and I'll get back to you soon after. Additionally I can be personally contacted by email, james@activevista.com.au

I hope you find your Cocoon tunnel highly rewarding throughout the seasons.

Kind regards and happy growing,

James Hutchinson

ActiveVista Pty Ltd
