

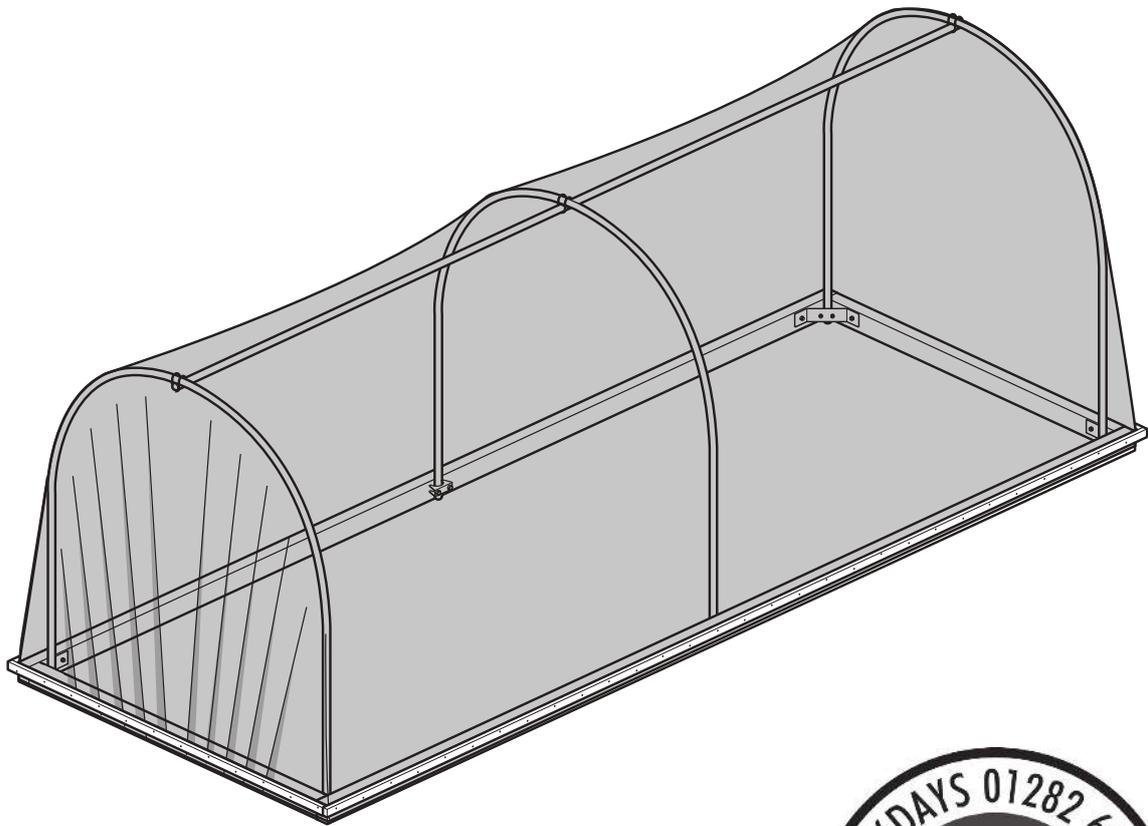


# FIRST TUNNELS

*the growing season just got longer*



[www.FirstTunnels.co.uk/Quality](http://www.FirstTunnels.co.uk/Quality)



## **Mini Polytunnel** (Portable Plant Protector) Construction Guide

**PPP**

# Introduction

A Mini Polytunnel or Portable Plant Protector can be easily constructed in a couple of hours, and if you can put together a piece of flat-pack furniture, you should have no real trouble in constructing your Plant Protector. We suggest performing construction in stages;

■ Find a comfy armchair and armed with a cup of tea (Tea Bag Enclosed) familiarise yourself with the instructions – Please use the checklist supplied with your Plant Protector and also the diagrams at the end of these instructions to identify the individual parts and components.

The example shown in these instructions may not match your order, but the same principle applies.

■ Erect the framework.

■ When covering you will find a second pair of hands very useful.

Taking a more logical, step by step approach allows you to assimilate and follow the instructions better. It should also produce an easier and hopefully a more enjoyable experience.

If you are experiencing problems with your polytunnel construction, you can call us between 9am & 5pm on **01282 601253** during the week.

If you require advice during the weekend, you can call us between 9am & 5pm on **07801 601253**.



## Warnings



### General

- Please keep children and pets away from the work area.
- Keep the working area free of tools and parts.
- Always wear safety glasses, ear defenders and a face mask where applicable.
- Wear gloves when working with the metal parts.
- Never wear loose clothing, hanging hair or jewellery.
- Always use sharp tools.
- Never carry any sharp tools in your pocket.
- Never use yourself or anyone else for support.
- Heavy items – Don't try lifting a heavy item by yourself, get some help.

### Electrical power tools

- If needed always use RCD's (Residual Current Devices) when using power tools outdoors, never use in wet conditions and follow the safety instructions provided with the tools.

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# Construction Guide

Please use the checklist supplied with your Portable Plant Protector (PPP) to identify the individual parts and components.

Although every care is taken when packing and dispatching your PPP, errors sometimes do occur.

Please contact us if you have any missing or damaged components.

If you experience any difficulties during construction please call us for assistance.

## Tools Required:

Battery Drill, Sharp Knife, Saw (for timber), Staple Gun & Staples, 13mm Spanner, 9mm Drill Bit, 4mm Drill Bit, Tape Measure, Hammer

## Timber Base Rail Assembly

**Parts Required:** NP3, CCT25, TBR125, TBR18, TBR32

A 5ft length PPP will be supplied with a timber length of 5ft 11in (1.8m) (TBR18).

A 10ft length PPP will be supplied with a timber length of 10ft 6in (3.2m) (TBR32).

A 15ft length PPP will be supplied with timber lengths of 5ft 11in (1.8m) & 10ft 6in (3.2m) (TBR18 & TBR32).

The timber base rails for the PPP is supplied with 3in x 2in pressure treated timber.

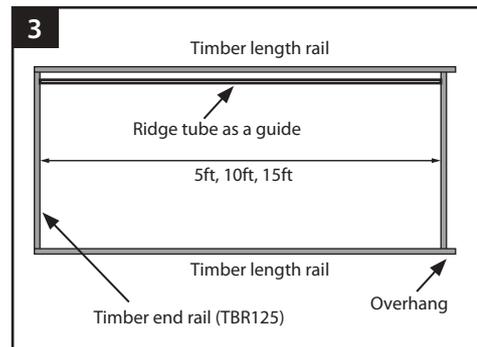
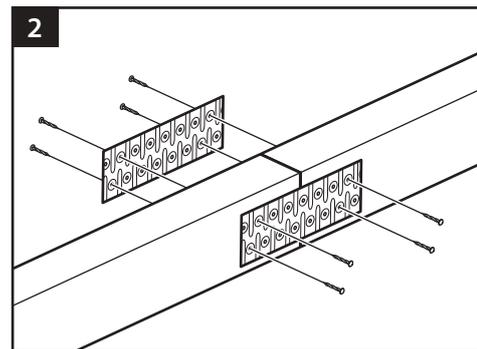
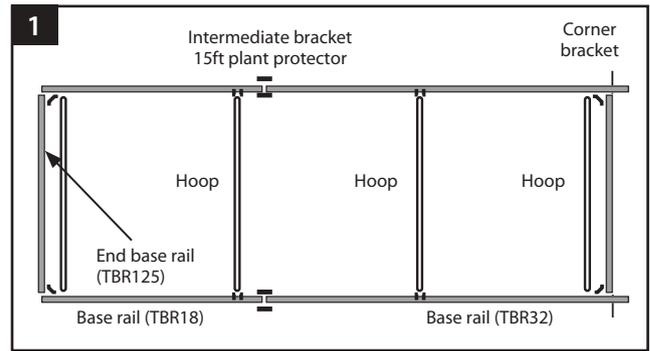
The timber base rail for the ends is supplied ready cut at a length of 4ft 1in (1.25m) (TBR125). The timber for the length will be supplied longer than required - you are required to cut it down to size (**dia 1**).

If you have purchased a 15ft long PPP you are required to join TBR18 and the TBR32 through the use of the Nail Joiners (NP3) (**dia 2**).

The timber length rail should be nailed to the timber end rail using the 4in nails from the two corner clamp packs (CCT25). Use a 4mm drill bit to create a pilot hole, this will assist you when nailing the two pieces together (**dia 4a**). The two timber length rails should overlap the end rail, i.e. leaving the internal measurement of the base at 4ft 1in (1.25m) (**dia 3**).

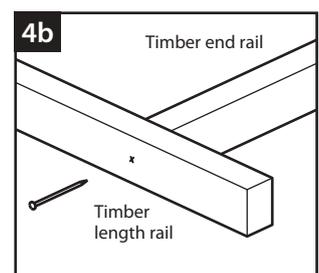
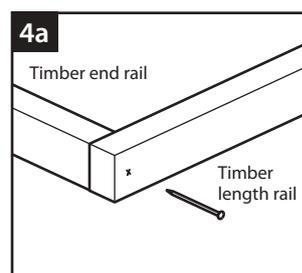
You are now required to fit the other end rail, but as mentioned earlier the length of timber supplied for the base will be longer than is required. The length should be fixed so that the internal measurement of the timber base equals the length of you chosen PPP, ie 5ft, 10ft or 15ft use the ridge tube as a guide (**dia 3**).

Fix the end rail in position as described above, trim off the overhang (**dia 4b**).



## TIP

Your PPP is supplied with a central ridge that when assembled also measures 5ft, 10ft or 15ft (**See Ridge assembly**). If you lay this internally and adjacent to the timber rail, you can use this as a form of template. Butt the end rail up to the ridge and fix to the timber rail length as described.



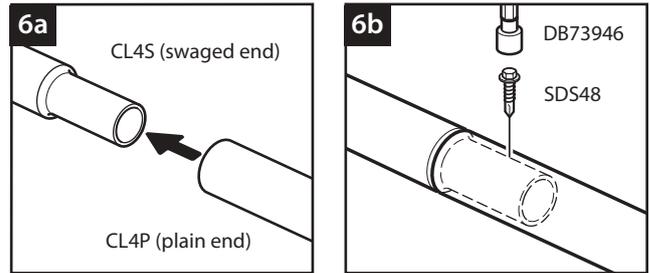
# Construction Guide

## Hoop Assembly

Each hoop is supplied in two pieces (CL4S & CL4P) (**dia 5**), they are joined together by slotting the swaged end into the plain end (**dia 6a**).

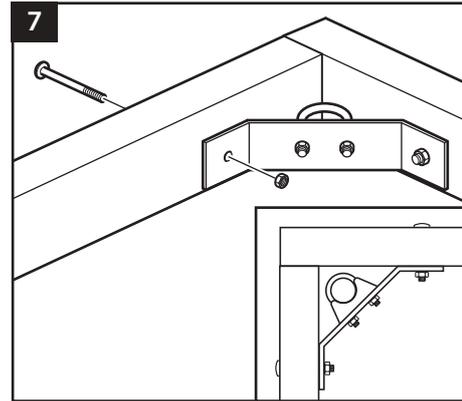
Both are secured together and held in place through the use of a self drill screw (SDS48) (**dia 6b**).

On a flat surface and with the aid of a battery drill and the screw holder (DB73946) screw through the two hoops -the screw is designed to drill its own hole.



## Corner Brackets

With the assembled timber base laid on a flat surface, use the corner bracket from the CCT25 pack. Hold the bracket at each corner and drill a hole using a 9mm drill bit. Once the holes have been drilled assemble the corner clamp and bolt in place, using the coach bolts supplied (**dia 7**). Repeat for the four corners.

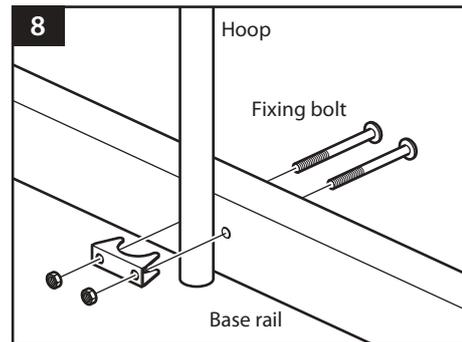


## Intermediate Brackets

(not applicable on 5ft Model)

Intermediate brackets (ICT25) holds the intermediate hoops in position at a 5ft spacing from each end.

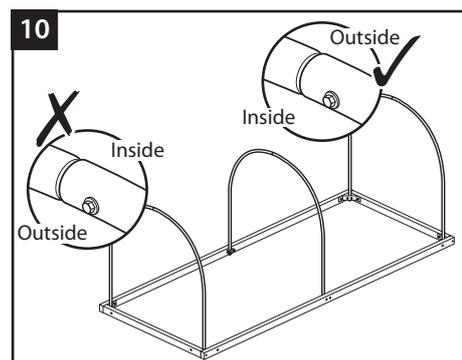
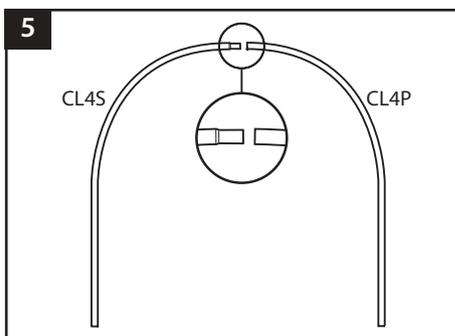
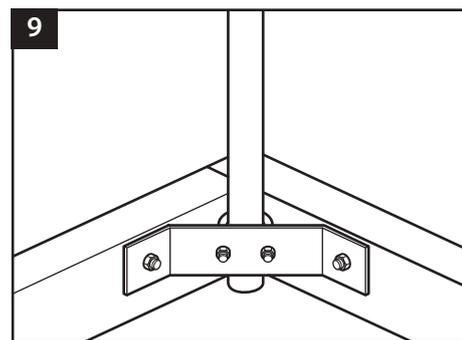
Mark the position by measuring 5ft internally from the end timber. Hold the hoop leg central at the 5ft mark and drill through the timber each side of the tube using a 9mm drill bit (**dia 8**).



## Fixing Hoops

The intermediate hoops are clamped into position using the intermediate clamps (ICT25) (**dia 8**).

Slot the hoops into the corner brackets (CCT25) (**dia 9**). Make sure that the screw heads are on the inside, so they don't damage the covering (**dia 10**). Once all the hoops are in position, tighten the clamps.



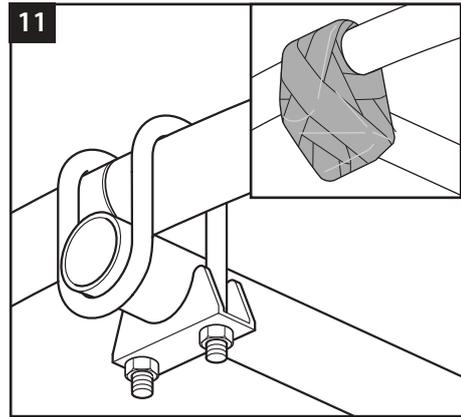
# Construction Guide

## Ridge Assembly

Your PPP has a central ridge that suspends underneath each of your hoops.

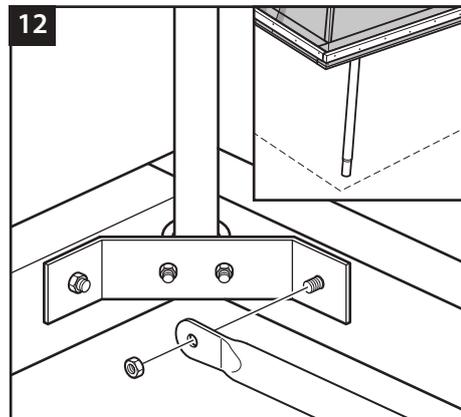
On 10ft and 15ft PPP the ridge tube comes in sections, you will need to assemble these sections together as in **(dia 6a & 6b)**. When assembling the ridge tube to the hoops make sure that the screw heads are on the inside, so they don't damage the covering.

This ridge is fixed onto the hoop using the ridge clamps (R2525). Tighten the end clamps with the end of the ridge tube protruding as little as possible through the clamp. On the end hoops, make sure the threaded section of the clamp is to the inside of the PPP **(dia 11)**. Use the silver protection tape (SPT1) to wrap around the ridge clamps and ridge tube ends to prevent any damage to the cover **(dia 11 detail)**.



## Ventilation Legs

Ventilation legs (25/50FS) fix onto the bolts of the corner brackets that's used to fix the timber side rail. Fix the leg onto the bolt using the supplied Nyloc nut (M8NYLOC) **(dia 12)**. This allows the leg to swivel into a position that holds the PPP off the ground for ventilation **(dia 12 detail)**, alternatively they can be folded away when not in use.

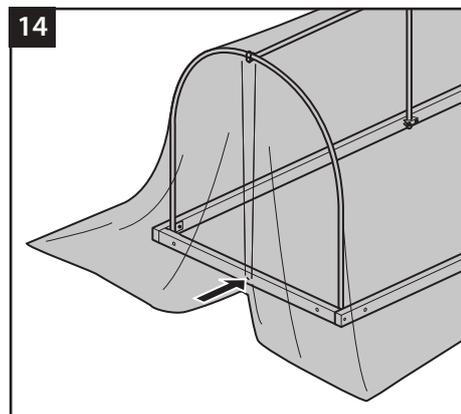
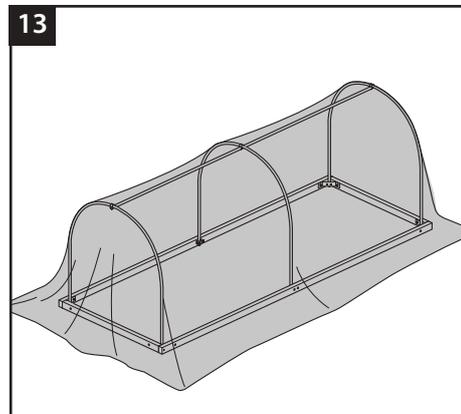


## Covering

Whichever cover you choose, the method of fixing is the same. Lay the cover over the frame and centralise in each direction **(dia 13)**.

Starting at one end of the PPP, use a staple gun to staple the cover in the centre of one of the end timbers **(dia 14)**.

At the opposite end pull the cover tight along the length and once again staple the cover to the centre of the end timber rail.



# Construction Guide

Now starting at the centre of one side of the PPP, lightly tension the cover and staple the cover onto the timber rail removing all creases and ripples, whilst working towards each corner (**dia 15**).

At the opposite side repeat the process of stapling the cover.

Having completed both sides, cut the cover at each corner at 45° to the PPP frame (**dia 16**).

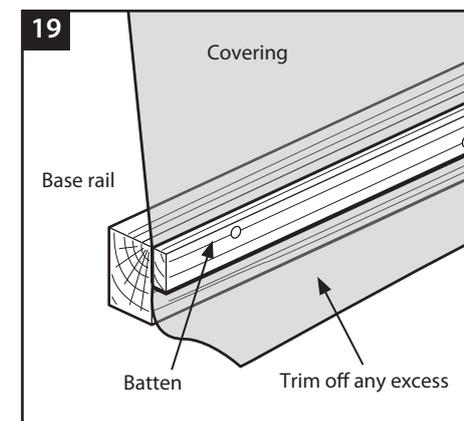
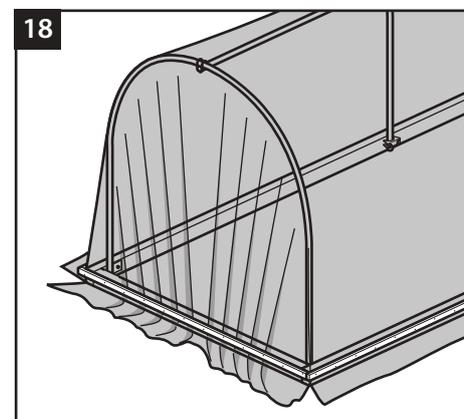
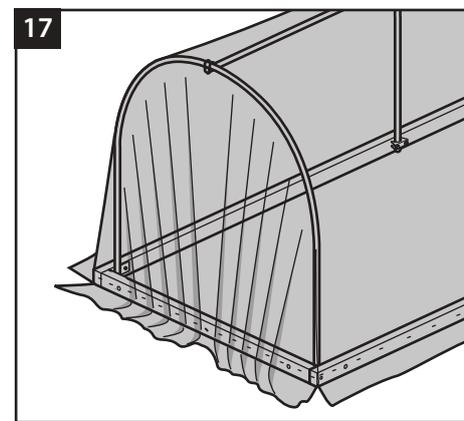
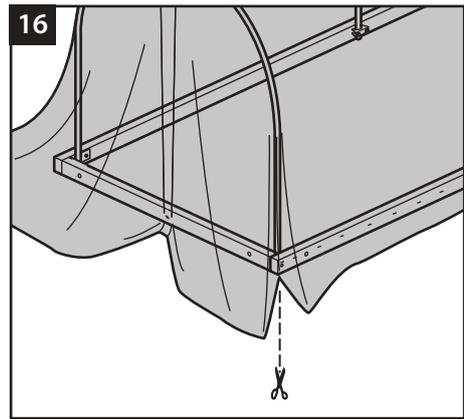
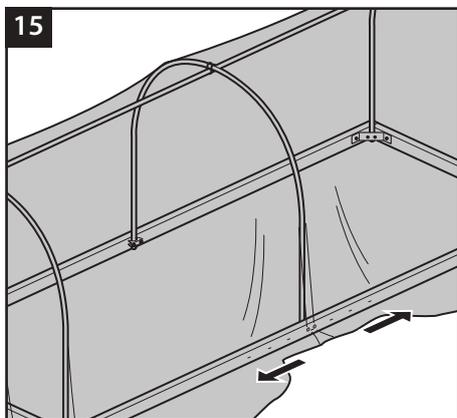
Finally pleat the cover at each end, in order to remove the excesses of the cover (**dia 17**).

## Fixing Battens

Your cover is now fixed but the staples used are only a temporary measure. To ensure a good strong fix, you are required to use the batten supplied (TIB18) to nail onto the timber base rail (**dia 18**).

The timber batten supplied is not cut to length, so will need to cut the batten to suit. In order to avoid the possibility of splitting the batten, place nails approx. 6in apart and alternatively top and bottom of centre (**dia 19**). Once the batten is fixed you can trim the excess cover.

Your Portable Plant Protector is now complete.



# Repairing Polythene

## Repair Tape

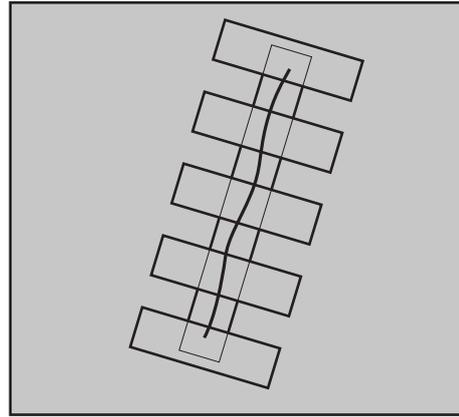
**Parts Required:** TA0004, TA0005, TA0006.

Small tears and splits can be repaired through the use of polythene repair tape. If you own a polytunnel it is also worth having a few rolls of repair tape in your shed drawer as prompt repair of tears/splits will help your cover last its full term.

The surface of the polythene should be dry and clean prior to fixing the tape. The polythene around the area of the tear/split should be pulled back together and then the tape should be placed along the length of the tear/split, and then further shorter pieces placed perpendicular to the first piece (similar to a suture).

If possible this process should be performed on both the inside and outside of the structure.

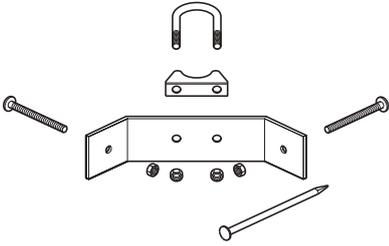
Various sizes of Repair Tape can be purchased from First Tunnels.



# Parts

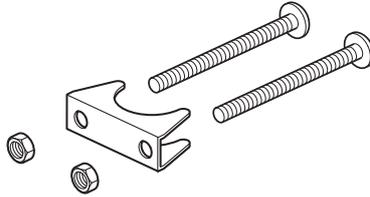
Parts and Quantities depend on the size ordered

**CCT25**



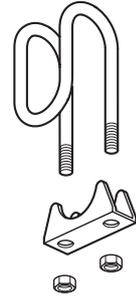
Corner Clamp

**ICT25**



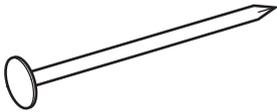
Intermediate Clamp

**R2525**



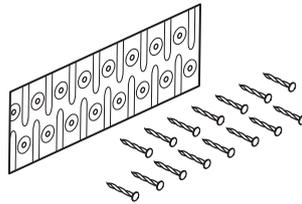
Ridge Clamp

**CN50**



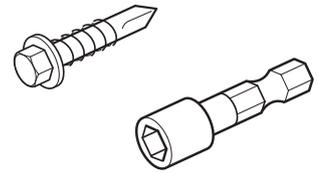
Batten Nails 50mm (pack)

**NP3**



Nail Plate Joiners

**SDS48, DB73946**



Tube Screws and Socket

CL4S

CL4P

Hoops

**25/152PP, 25/157PS**

25/152PP

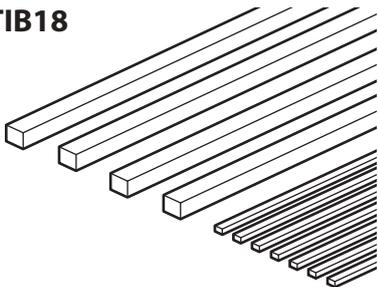
25/157PS

Ridge

25/50FS

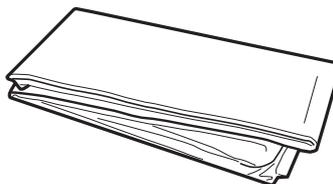
Ventilation Leg

**TBR125, TBR18, TBR32,  
TIB18**



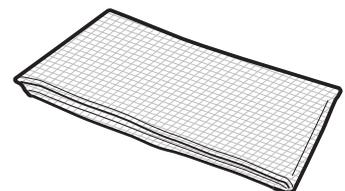
Timber Base Rails

**PM**



Polythene

**NEM0001**



Netting

## Parts continued

Parts and Quantities depend on the size ordered



## FAQs

### **Can I shrink the size of Plant Protector once delivered?**

The horizontal frame/tubes can be cut down to the required length, this should be done before starting any of the construction.

### **I'm struggling using the 'Self drill screws' for joining the metal tubes. Is there a 'knack' to it?**

The screws are designed to drill their own hole. The method we find best is to start slowly and once the drill tip of the screw has begun to bite into the tube, press home firmly and increase speed. You may find drilling a small pilot hole first may prove helpful if you still continue to struggle.

### **When I try slotting a tube together (plain to swage), I find it very tight and difficult?**

The tube has an internal weld and, although very rare it can be 'rough and raised' and makes slotting the tube together trickier than normal. Filing the weld should solve the problem.

### **I'm planning to perform the construction at a weekend, but might need some technical support.**

We strongly urge you to read through the instructions prior to beginning construction. Mentally building your polytunnel and identifying each component prior to actual construction will usually identify any shortcomings in the instructions and/or damages/shortages. It also helps the process of assembly and gives you the opportunity to contact us with any query you have at a time we are open.

If you are experiencing problems with your polytunnel construction or just need a little bit of technical support, you can contact us or use the telephone 01282 601253 9am - 5pm Monday to Friday and 07801 601253 at the weekend (please note that this service is not available over the Christmas period and Bank Holidays). This allows you to talk directly with one of our constructors, ask their expert opinion, get the answer and complete your construction.



# Polythene Information Sheet

## Introduction

Polythene is a flexible membrane, which is used to create a micro-climate in which plants grow better than they would if they were unprotected. Polytunnels not only allow you to grow crops which are from a more temperate climate, but also to grow crops earlier in the year, and later in the year, so lengthening the growing season.

Modern polythene films are extruded and are made up from 3 layers with different filters in each layer. This is one of the reasons they are incredibly strong and can often be stretched more than 500% before they break.

We are committed to providing the highest standard of product and service to our customers. We will continue to invest in the latest technology and use materials best suited to meet the needs of the grower.

Our Quality Policy is to aim to deliver defect free products and services that conform, every time, to the requirements agreed with our customers.

## Guarantee



The polythene sheet supplied is guaranteed for 5 years against breaking down through exposure to sunlight.

However, if it is correctly applied to the structure, it is not uncommon to get 7 or even 10 years out of a cover. In the unlikely event that you have been supplied a defective cover we will give you another cover completely free if it fails in the first year. The only manufacturing defect however where this is likely to happen is where the fold splits. However you are not covered if the fold splits and the cover is not tight.

After the first year we will give you a new cover less the amount of use you have had from it already. i.e. the cover is guaranteed for 60 months and if you have used it for 24 months you will have to pay a fifth of the cost towards the cost of a new cover.

In the event of the premature failure, the following discounts will be given on the purchase of a replacement film:

	Discount
Failure in 1st year	100%
Failure in 2nd year	80%
Failure in 3rd year	60%
Failure in 4th year	40%
Failure in 5th year	20%

To register a claim, contact the polythene supplier from whom the film was purchased and have the following information available:

- Type of polythene (ie, Clear, Thermal or White)
- Date polythene was purchased
- Date polythene was installed
- Size of polythene sheet (width and length)
- Date when problem was noticed
- Invoice number
- Description of the problem
- You will also be required to provide a written letter and photograph(s) of the fault.

## Recommendations & Conditions

The way in which polytunnel films are handled, installed and looked after, can greatly influence the lifetime of the film and its effectiveness in use. The following gives recommendations of use, and factors, which will limit the life of the polytunnel film and therefore the extent of our guarantee.

Prior to fitting the polytunnel film, it should be stored away from heat and light – preferably indoors, in the original wrapping. If outside, cover the polythene with an opaque heat reflecting tarpaulin. Film should be used within 12 months of purchase.

Heaters must be placed so that hot air is directed away from the film.

The metal structure must be insulated from the film with good quality anti-hot spot tape. The lifetime of anti-hot spot tape is not likely to be more than ten years, so new tape will be needed for the second or third cladding. Old tape may have breaks in the foam or in the polyester facing, and this should certainly be replaced.

Avoid excessive use of pesticides, herbicides, fungicides, fertilisers, etc. Avoid chemicals coming into direct contact with the film, for example by spray drift. Agrochemicals can interact with the UV stabilising systems and deactivate them with the risk of premature failure. Chemicals containing sulphur or chlorine have been found to be the most harmful in this respect. Ensure that structures are free from corrosion, as this will adversely affect the life of the film. Iron contamination from rusted structures acts as a photo-degradation promoter. In the event of failure, evidence of high levels of sulphur, chlorine or iron will invalidate the guarantee.

It is regretted that it is not possible to give compensation for consequential claims.

## Polythene Care

A cleaning agent called Algon is ideal for cleaning covers. Repairing holes in the tunnel can be done with repair tape

**This is available from First Tunnels.**

# Pressure Treated Timber Information Sheet

## Handling Precautions

When working with timber, wear gloves to protect the skin against abrasions and splinters. Any cuts and abrasions should be protected by a waterproof dressing. When power-sawing and machining, wear goggles to protect the eyes from flying particles. Wear a dust mask and, whenever possible, perform these operations outdoors to avoid accumulations of airborne sawdust. Avoid frequent or prolonged inhalation of sawdust. Consult HSE Guide EH40, 2002 for further information on exposure controls to wood dust. In order to prevent injury, care should be taken when lifting or moving timber.

## Personal Hygiene

After handling or working with treated timber all exposed skin should be washed before commencing other activities, especially eating, drinking, smoking or going to the toilet. If sawdust accumulates on clothes, clean them before reuse. Launder heavily soiled clothes separately from other household wash items.

## End Use Considerations

TANALISED® E pressure treated timber can be used in internal and external building application and outdoors, in ground contact or above the ground, without any need for further protection. It should not be used where it may come into contact with drinking water or for food preparation surfaces/structures or containers for storage, or in circumstances where the preservative may become a component of food or animal feed.

It is best practice to prepare the timber as fully as possible prior to treatment to ensure best results.

If any cutting, notching or drilling is made to the timber following treatment then any exposed surfaces should be liberally swabbed with ENSELE® end grain preservative to maintain the integrity of the treatment.

## On-site Precautions

All sawdust and construction debris should be cleaned up and disposed of after construction.

## Waste Disposal

TANALISED® E pressure treated timber is not classified as special or hazardous waste.

Post treatment processing wastes, such as sawdust and off-cuts, must not be used for animal litter or bedding.

TANALISED® E pressure treated wood should not be used for fuel in barbecues, cooking stoves or grates. Small quantities (less than 0.5 tonnes) can be burnt in the open with due care and attention to your neighbours. Household holders should preferably dispose of the timber, sawdust or ash through the ordinary waste collection service or at a local authority amenity/disposal site.

Any waste timber, sawdust or redundant timber from commercial or industrial use (e.g. construction sites) should preferably be recycled by reuse, or disposed of to an authorised landfill or to a correctly controlled and approved waste incinerator.



# FIRST TUNNELS

*the growing season just got longer*

If you experience any difficulties during construction please call us on:

**Monday to Friday (9am - 5pm) 01282 601253**  
**Saturday & Sunday (9am - 5pm) 07801 601253**  
**Email/Web: [help@firsttunnels.co.uk](mailto:help@firsttunnels.co.uk) or visit our web site [www.polytunnels.co.uk](http://www.polytunnels.co.uk) for assistance.**



We know many people build their polytunnels at the weekend when our office is closed.

So we've set up the First Tunnels Construction Helpline specifically for these weekend periods. This allows you to talk directly to a constructor, ask their expert opinion, get the answers and complete your polytunnel.

If you'd like us to ring you, simply send us a text and we'll ring you back. If you are an O2 customer the call will be free of charge. Please note this service is NOT available over the Christmas period and Bank Holidays.

Share your gardening pictures and videos, post hints, tips and experiences.  
PLUS... find out more about our online gardening community.



[www.PolytunnelGardening.co.uk](http://www.PolytunnelGardening.co.uk)



[www.facebook.com/polytunnels](http://www.facebook.com/polytunnels)



[www.youtube.com/polytunnels](http://www.youtube.com/polytunnels)

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