



**HEAVY DUTY STEEL
2.5M DECORATIVE DOMED FRUIT
CAGE
ASSEMBLY AND INSTALLATION INSTRUCTIONS**

PRODUCT CODE: GFC-130/132

Revision 8

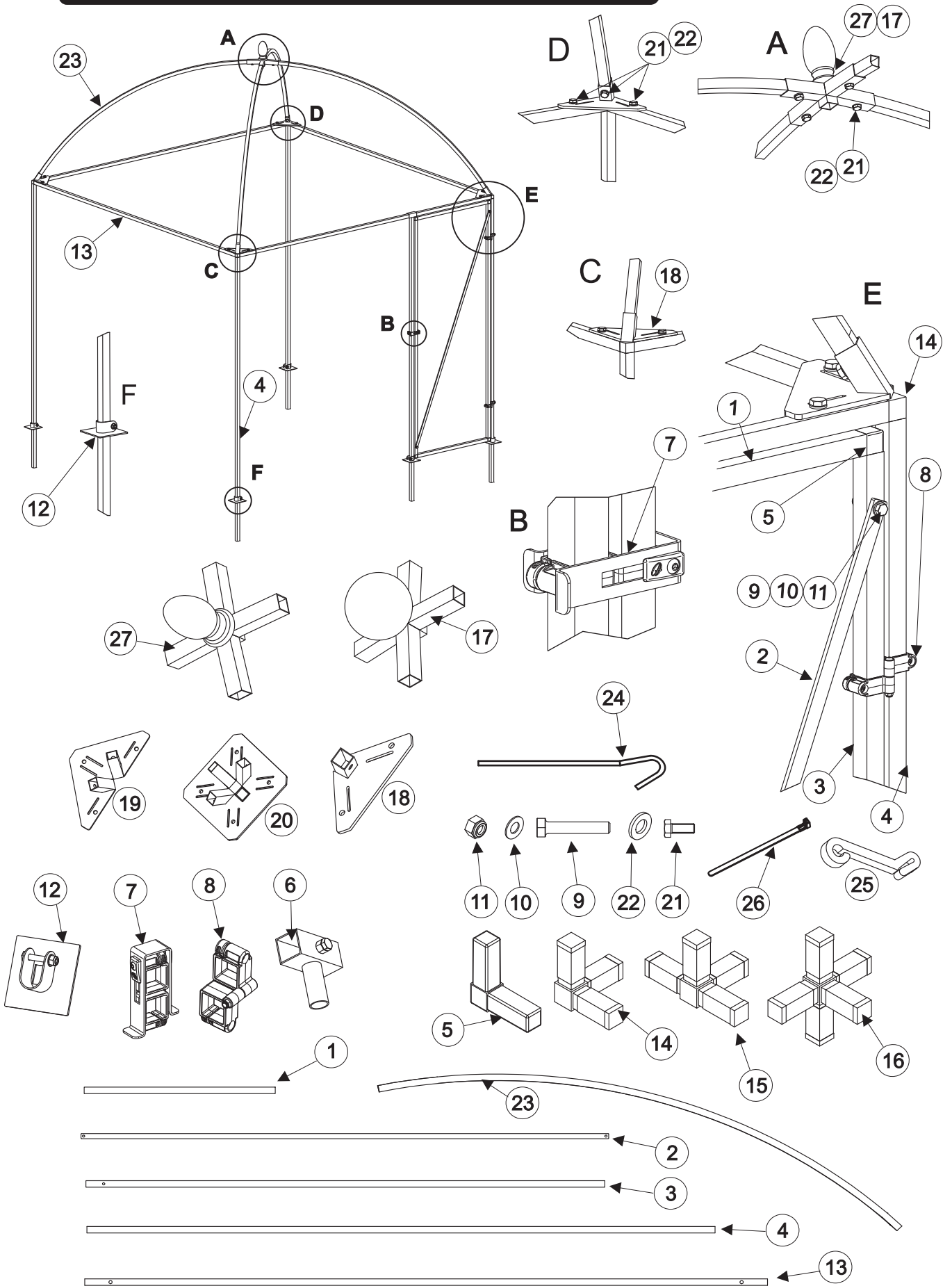
If you wish to concrete your cage in place please see page 8.

For more information on our cages please follow the below link:-



INS811

PART IDENTIFICATION



DOMED FRUIT CAGE ASSEMBLY INSTRUCTIONS

Introduction

Thank you very much for purchasing this Harrod Horticultural Decorative Domed Fruit Cage.

Safety

To install your cage safely we recommend that you enlist the help of three or more people. Take extra care when working on step ladders on soft ground.

Tools

1 x soft rubber mallet, 1 x 8mm spanner, 2 x 13mm spanners, 1 x 17mm spanner, 1 x 5m tape measure, 1 x pair of scissors, 1 x ball of string, 1 x spirit level, 1 x hole former (ARC-021) (Optional)

Part Identification

Before constructing the fruit cage remove all protective packaging and check that all parts listed in the pack contents list (CHK811) are present. Use the part identification diagram on the opposite page to help you recognise the parts. You will have varying quantities of cage parts depending on the number of units combined to make up your specific arrangement. Each door kit, of which you will have at least one, comprises of the parts list in the table below left.

HEAVY-DUTY STEEL DOOR KIT IDENTIFICATION (GDN105)

REF NO	Part Description	PART No.
1:	2 x 0.7m Horizontal Support	PGG117
2:	1 x Diagonal Support	PGG007
3:	2 x 1.9m Vertical Supports	PGG006
4:	1 x 2.3m Door Support Upright	PGG112

HEAVY-DUTY STEEL DOOR ASSEMBLY PACK (GDN116)

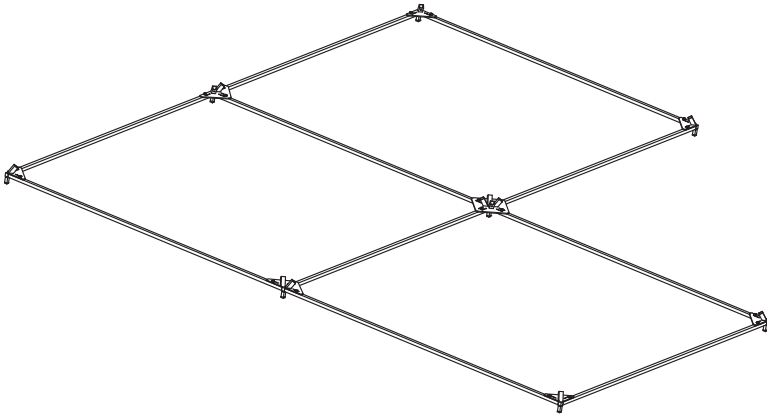
REF NO	Part Description	PART No.
5:	4 x Two-Way Connector	GDN-676
6:	1 x T-Joint	PGG005
7:	1 x Catch and Fixings	GDN-809
8:	2 x Hinge and Fixings	GDN-808
9:	2 x Hex Bolts M8 x 45mm	GPP510
10:	4 x Plastic Washers M8	GPP710
11:	2 x Nylock Nuts M8	GPP500
12:	1 x Foot Plate and Clamp	GDN-108

Note: A 3mm allen key is provided with GDN-809 for assembly of GDN-809 and GDN-808

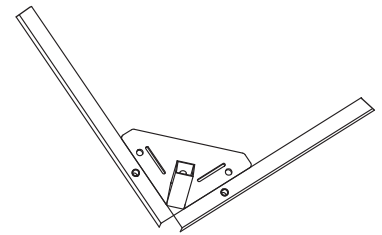
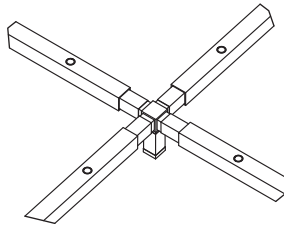
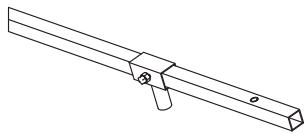
DOMED FRUIT CAGE PARTS IDENTIFICATION (GFC-130 & GFC132)

REF No	PART DESCRIPTION	PART No
4 :	2.3m Support Upright	PGG112
12:	4 x Foot Plate And Clamp	GDN-108
13:	2.5m Horizontal Support	PGG035
14:	Three-Way Connector	GDN-675
15:	Four Way Connector	GDN-679
16:	Five Way Connector	GDN-678
17:	Dome Fruit Cage Finial (option 1)	PGG055
18:	Top Corner Plate	PGG046
19:	2 Way Connector plate	PGG012
20:	4 Way Connector plate	PGG013
21:	Hex Bolt M10 x 20mm	BOL342
22:	M10 Washer	BOL712
23:	Dome Curved Roof Support	PGG041
24:	Ground Peg	GPP001
25:	Net Clip	GPP005
26:	Net Tie	GAR914
27:	Cast Decorative Finial (Option 2)	PGG022
NA	2m Wide Standard Sid Netting	GAR070
NA	Fitted Roof Net	GDN-087
NA	Whipping Twine	TWN-294
NA	Whipping Needle	TWN-295

DOMED FRUIT CAGE ASSEMBLY INSTRUCTIONS



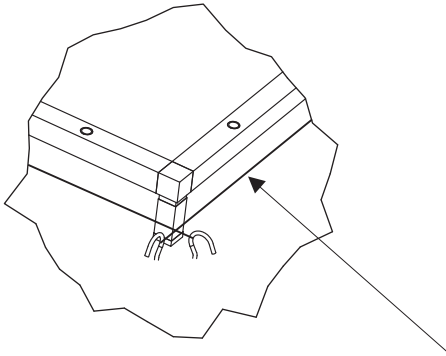
1: After reading the introduction & checking to make sure that all the required parts are accounted for within your pack. Lay out on the ground in the desired arrangement using all 2.5m horizontal support bars (Ref.13), all the connector plates (ref:18,19,20) and all three, four 7 five way connectors (ref: 14,15,16).



2: Decide where the door(s) should go (see step 9) and slide a T-Joint (ref:6) onto the appropriate horizontal bar(s) (ref:13). Ensure that the orientation of the parts is as shown, with the threaded holes facing upwards and the locking bolt on the T-joint facing into the cage.

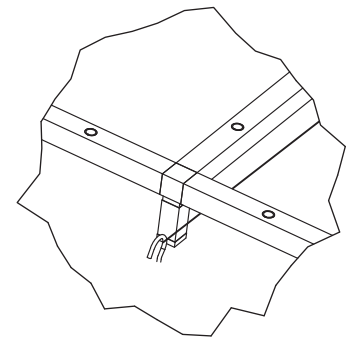
3: Using the correct connector (ref: 14,15,16) for the joint in question, connect the 2.5m horizontal bars (ref:13) together to form a framework of bars which represents the roof of your cage (in plan form) on the ground. The soft mallet may be needed to help slide the bars together.

4: Check that you are happy with the positioning of the framework with your plot. Then using a corner connector plate (ref:18) make absolutely sure the joints are square as the ultimate success of the assembly relies upon this.



5: Using string tied to the ground pegs (ref:24), mark out the plan of the cage on the ground. Where ever the string cross this accurately marks the intended position of an upright (ref:4).

6: Ensure that the marking string is pulled tight and accurately follows the framework of horizontal bars which act as a template. Check once more that all is square as described in step 4.



7: When more than two horizontal bars come together, it is essential to mark which side of the string the uprights will be located. Ground pegs (ref:24) can be used for this.

DOME FRUIT CAGE ASSEMBLY INSTRUCTIONS

8: Once all of the marking out is complete, carefully dismantle the horizontal bar framework leaving connected only bars that can exist as a complete square unit (see step 13 for reference). Note that the threaded holes in the horizontal bars always face upwards.

9: Your site should be laid out in a similar way shown in (fig1). If your site slopes, level the strings with the aid of a spirit level. Position the door on the lowest side of the cage if possible to ensure that all of the uprights (ref:4) can enter the ground at least the required distance of 32.5cm.

10: With the aid of a mallet and a stake, carefully create appropriately sized holes in the ground about 32.5cm deep to receive the uprights (ref:4). The uprights can be concreted if required but do not set until the steel framework is fully assembled and levelled.

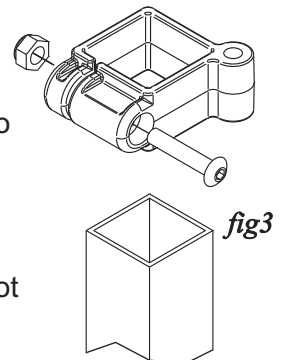
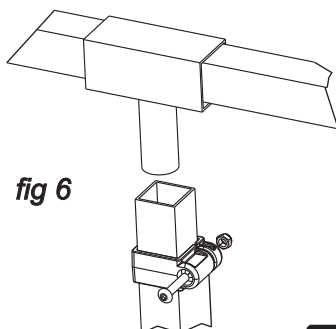
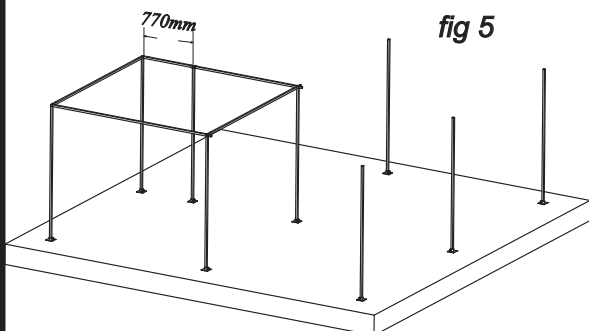
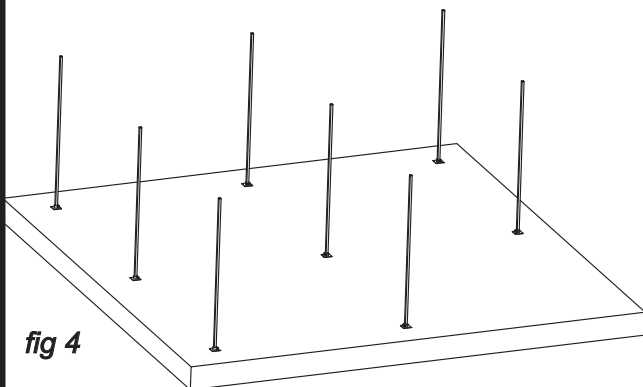
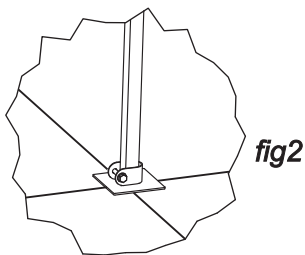
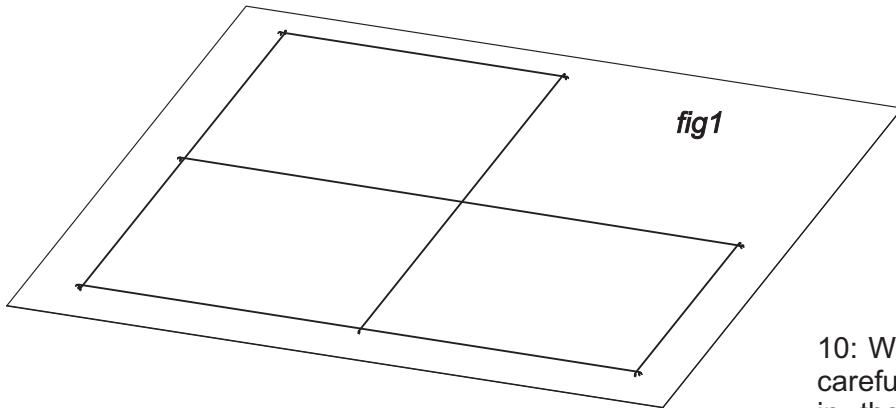
11: Place the uprights (ref:4) into the holes and at the same time slide on the foot plates (ref:12) as shown in (fig 2). The uprights should be pushed into the ground approximately 30cm at this point.

12. Before attaching the roof unit to the uprights ensure that two hinge parts (Ref.8) are slid onto the hinging upright as shown in (fig 3). Attach the fixings but at this stage do not fully tighten. Ensure the pivot axis is towards the outside of the cage for a door that opens outwards.

13: Your site should now look something like shown in (fig 4) - depending on your own particular cage configuration. Check the uprights are vertical with the aid of a spirit level.

14: Locate the door support upright(s) (ref:4) such that the gap between it and the upright door will hinge is 77cm between inside faces (fig 5).

15. Slide the flat latch block (ref:7) onto the door supporting upright and tighten loosely as shown in (fig 6). Position the T-joint along the horizontal bar to line up with the door support upright.



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16: Locate the first square unit into the tops of the uprights and the support upright.

Locate any other complete square horizontal bar units in the same way making sure all threaded holes on the horizontals are facing upwards.

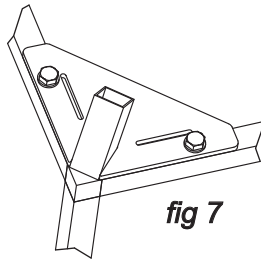


fig 7

17: At all horizontal bar joins, bolt (ref:21,22) the appropriate connector plate (ref:18,19,20) as in the example shown in (fig 7) using a 17mm spanner.

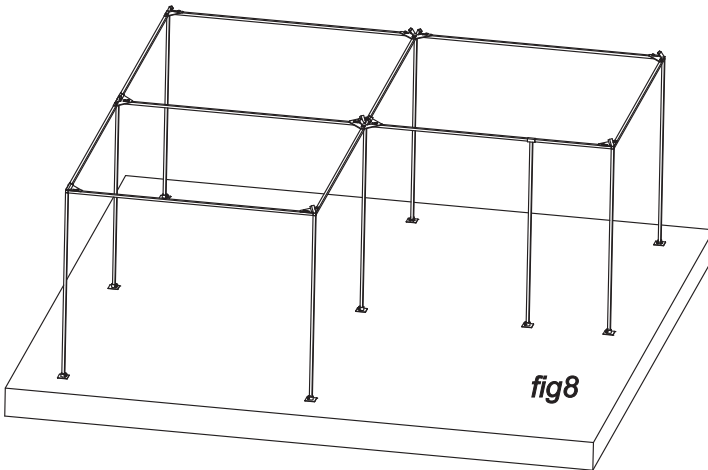


fig 8

18: Your cage should now in essence resemble (fig8), with all the horizontal bars and connector plates in place. On the side(s) of the cage that the door(s) are located measure from the ground to top face of the horizontal bar. With a soft mallet, tap the uprights into the ground until this measurement is 2 metres. Check that the door support upright (ref:4) is vertical and then tighten the bolt with a 13mm spanner.

19. The door frame(s) can be assembled with the diagram on page 2 to assist you. Before inserting the connectors ensure the hinge/latch blocks are inserted on the vertical bars as shown in (fig9).

The hinge blocks must be in the same orientation as that on the door hinging upright and the flat of the catch blocks must face each other.

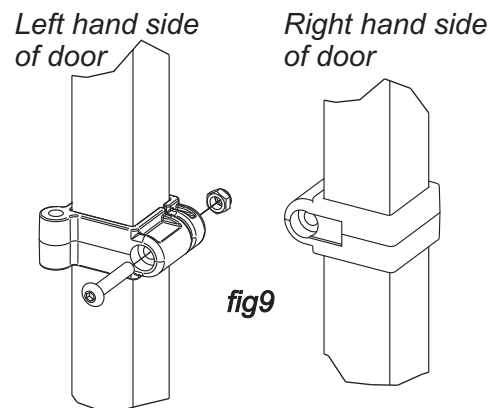


fig 9

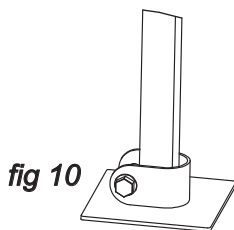


fig 10

20: Using two 13mm spanners lock the foot plates (ref :12) in place on the door support upright and the hinge by tightening the M8 bolt. This prevents the uprights sinking. After this level out all the horizontal bars using a spirit level and soft mallet. Lock off all remaining foot plate clamps once this is done (fig10).

IMPORTANT NOTE:

Orientation of the curve bars is important as the holes are different distances from the ends.

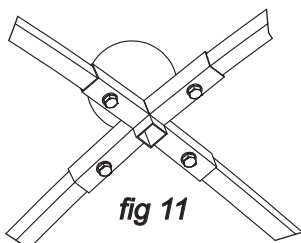


fig 11

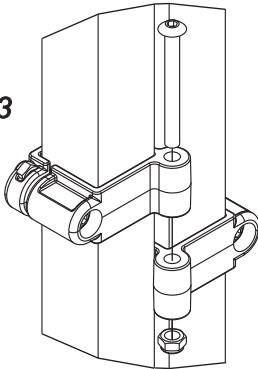
21: Take the connection node/finial (ref 17 or 27 depending on choice) and insert the curved roof bar with the hole 3.5cm from the end, and bolt together using an M10 bolt and Washer (ref 21, 22) in place with the aid of a 17mm spanner (fig 11). Assemble as many roof units as required for the constructed framework and place on the outside of the cage. Then place a fitted roof net over each unit.

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22: Slide the fitted roof net down over the finial and align the seams with the curved bars. Using net ties (ref :26) secure the net around the base of the finial and also around the curved bars. Trim off the ends of the ties and also any untidy stray netting.

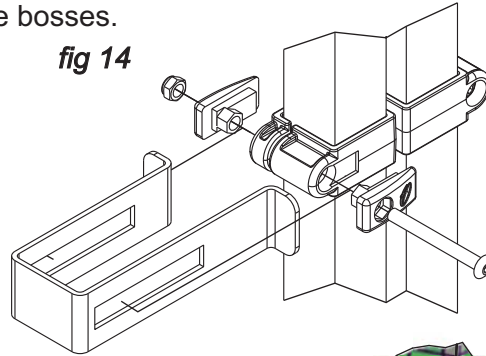
With the aid of at least three people lift the unit(s) into place .

fig 13

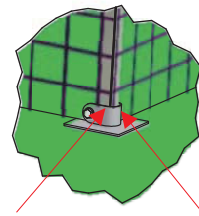
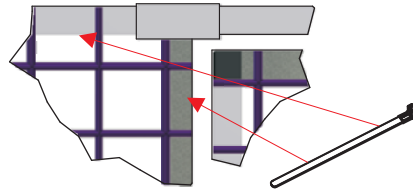
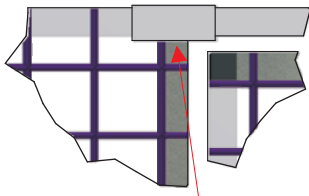


24. Place the assembled door frame in position and secure in by joining the hinge blocks (Ref.8) as shown (fig 13) and tightening the bolts with the 3mm allen key supplied and an 8mm spanner. Note as the hinge blocks must spin on each other do not over tightening the long bolt/nut through the bosses.

fig 14



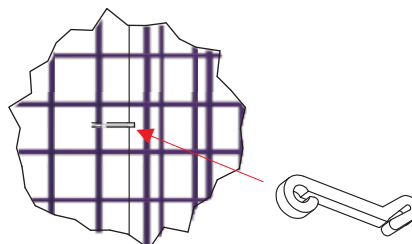
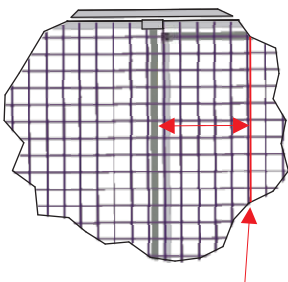
25. Secure the latch in place by sliding it over the latch block and inserting the latch inserts as shown (fig 14). Tighten the bolts with the 3mm allen key supplied to hold in place. Note the latch should not be over-tightened as it must slide freely. Note the latch has one longer side and this must be positioned on the side you wish to open the door.



26: To fix the 2m wide side netting, start by cutting to allow the net to wrap around the door support upright. This will allow the top edge of the net to run along the top edge of the horizontal support bars.

27: Wrap the cut section of the side net around the door support upright as described in step 24. Tie in place using net ties (ref :26) at the top and the bottom of the upright and a couple equally spaced in between. Secure the top of the net along the horizontal bars using net ties (approx four for every 2.5m length).

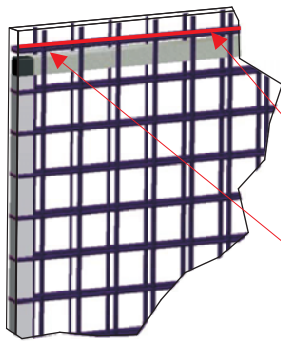
28: Continue to unroll the side netting all the way round the perimeter of your cage, keeping it as taught as possible, securing as step 25. When corners are encountered snip the bottom few cms flush with the ground to allow the net to neatly fold.



29: To finish the side net and to cover the door, unroll about 30cm past the door and cut vertically.

30: Fold the side net around the catch side of the door and hold securely with several equally spaced net clips (ref:25). A small cut can be made in the net to allow the catch to protrude cleanly.

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31: Trim the net level with the top of the door. Any side net sticking up above the top edge of the 2.5m horizontal bars around the perimeter of the cage can also be trimmed. Secure the net to the door using ties (ref :26).

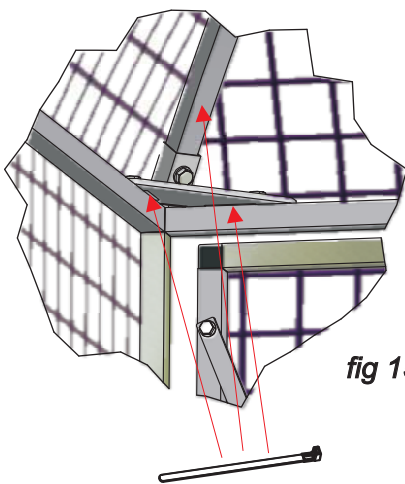
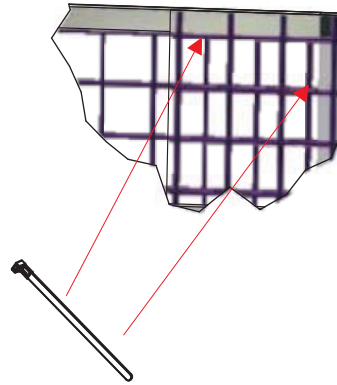


fig 15

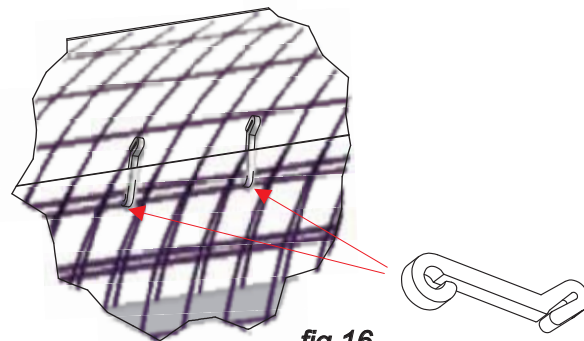


fig 16

32: Using net ties (ref:26) passed through the slots provided in the corner connector plates secure the fitted roof net(s)(fig15). Then using more net ties (approximately 1 every 40cm) work your way up the curved roof support bars (ref:23) and secure the net to the curved bars along the net's seams (fig16). Where two roof nets meet, pull one of the net's edges over and under a horizontal bar and secure to itself with net clips (ref:25). Do not pull the net too tight or it will not follow the curved roof bars. Next pull the adjoining net's edge under the horizontal bar and secure to the underside of the other net panel. Again do not pull the net too tight or it will not follow the form of the curved roof bars.

33: Load the whipping needle with the whipping twine supplied by first tying one end of the twine into a loop over the spine in the centre of the needle. Pull the twine to the blunt end of the needle and turn the needle. Wrap the twine around the central spine and back under the blunt end of the needle. Continue to wind the twine onto the needle stopping just before the needle becomes too large to fit through the mesh of the fruit cage. (For images of this please see page 8).

34: With the whipping needle loaded with twine, tie the end of the twine through the slot in the appropriate connector plate. Then feed the needle around the horizontal bar and through the net to neatly tie in the nets. Finally tie off the twine through a slot in the opposing connector plate. When you are completely happy with the result, remove all the net clips (ref :25) and trim off any untidy net edges with a pair of scissors.

35: Walk around the perimeter of your cage and insert the ground pegs (ref:24) approximately three per metre to secure the bottom of the side net. Check that the top edge of the side net lines up with the top edge of the horizontal bars, trimming where necessary. Tie in the sides of the roof net(s) to the horizontal bars and side net by using the twine and whipping needle, again trimming where necessary. Net clips (ref:25) can be used to aid in this process.

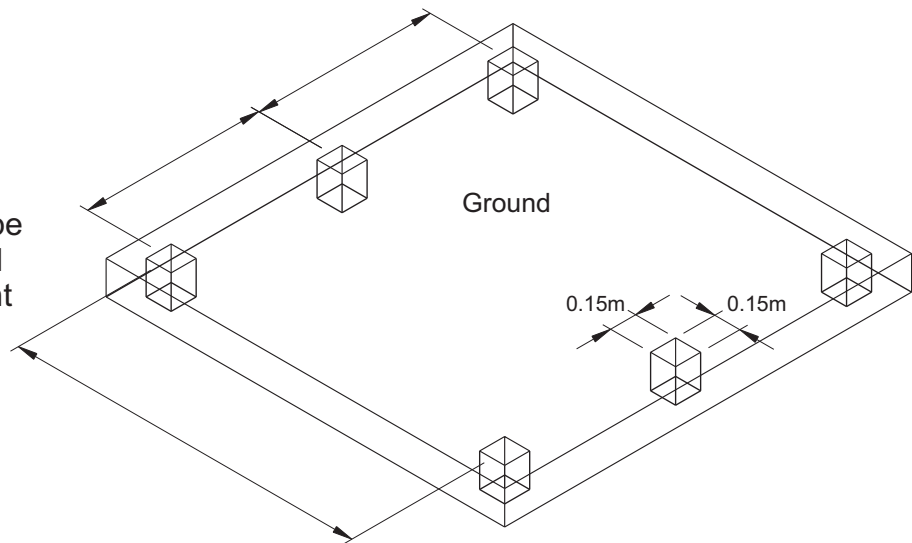
36: Finally, if you are happy with the fit of the nets, with scissors or side cutters trim off the ends of the net ties. You may wish to also whip the roof nets to the curved bars. Your cage is now finished - Happy Growing!

DOMe FRUIT CAGE ASSEMBLY INSTRUCTIONS

Concreting your Cage

In most cases uprights will not require concreting in place. However if you require extra rigidity you may prefer to secure the uprights with concrete.

0.15m x 0.15m holes can be dug to the 32.5cm required depth at the marked upright locations.



Once the frame is assembled holes can be backfilled with dry mix post-crete. When concreting your uprights in place leave some space at the top where soil can be placed over the set concrete.

Set the uprights level in the dry mix post-crete by bracing with 45 degree wooden stakes. G-clamps can be used to secure the braces to the uprights. When satisfied that the uprights are vertical, soak the post-crete with water as instructed.

Ready made post-crete is available from DIY stores.

Loading the Whipping Needle

