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Construction Instructions for Continental and Quickfit Clearspan Frame Marquees



C F Barker & Sons (Marquees) Ltd trading as BARKERS Marquees Office Address - 1 St Katharines Road, Caterham, Surrey CR3 6ST

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ERECTION INSTRUCTIONS - CONTINENTAL & QUICKFIT FRAME TENTS

CONTINENTAL & QUICKFIT FRAME TENTS

A system of clearspan frame tents in widths from 3m to 12m wide, which can be extended by means of 3m bays. The advantages of a lightweight frame, safe working practises and speed of erection make this the ideal type of relocatable structure.

The framework is made up from Channelled Aluminium sections, with Steel joints. The Fabric covers are usually PVC coated Polyester with the following properties:

Fire retardent to BS 5867, European and American standards.

UV stable, Bacteriacide and Fungicide treated.

Low wicking properties to reduce deterioration of the base cloth.

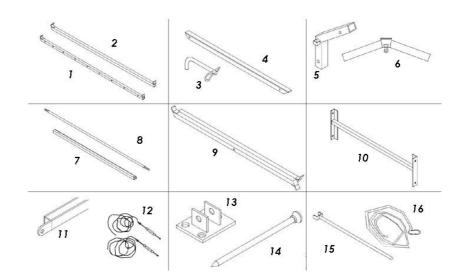
External lacquered coating for additional protection.

Polycotton fabrics are also available if required.

The roof covers have a beading (keder) welded along each edge, this runs through the upper channels on the frame creating a water and air tight seal with the framework. The covers are then tensioned to the eave purlin. Walling panels have a centre parting so they can be drawn back like a curtain, the lower channel on the eave purlin is effectively the "curtain rail".

PARTS IDENTIFICATION

- 1. Eave Purlin
- 2. Roof Purlin
- 3. Locating Pin and R-Clip
- 4. Roof Beam
- 5. Eave Knuckle
- 6. Roof Knuckle
- 7. Leg
- 8. Ground rail
- 9. Scissor Brace
- 10. Portal Beam
- 11. Gable End Leg
- 12. Roof Wires
- 13. Base Plate
- 14. Iron stake
- 15. Lifting hook
- 16. Throwing Over Rope



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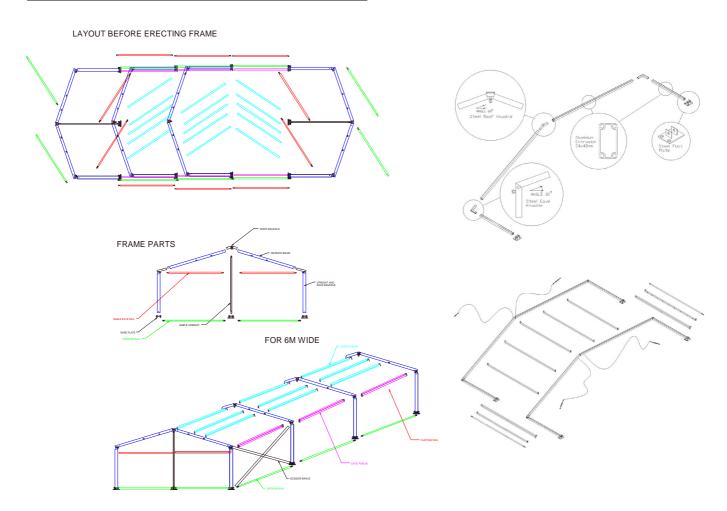
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STAGES IN ERECTING THE TENT:

Step 1: Lay out and lock the framework together.



Identify the area on which the tent is to be erected and mark the outline on the ground with a string line.

Lay out the framework on the ground in such a way that reduces the amount of double handling, i.e. as close as possible to the final position, it is useful to lay out the ground rails first as these give an easy indication of where subsequent items should be.

Bolt the frame together in their "A"frames (hoops) using the locking pins and "R" clips provided.

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Make sure that the end of the plate with the single hole is facing outwards, and secure with an **R-Clip**, ensure that the **R-Clip** locates on the outside of the **leg**.

Ensure that the hole on the leg for the ratchet strap is facing outwardsThe ground rails should be temporarily fitted onto the base plate pins at this stage and iron stakes driven fully into the ground. If roof wires are required, ensure these are bolted onto the roof knuckles of the first bay. The gable end eaves can be left until after the frame has been lifted vertical before locking up to reduce the weight.

Slide the gable end fabric triangles into the upper channel on the gable end frame "Hoop". If weather conditions pre-empt erecting the gable with the fabric in place, this can be delayed until the frame is erected; requiring the use of steps or ladders.

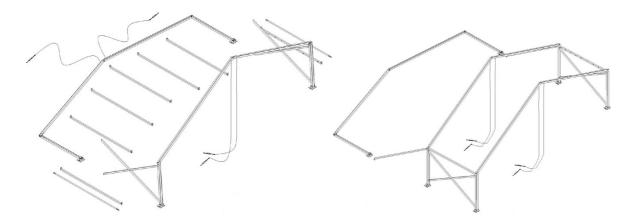
** Note – if lined, at this point tie lining tackle pulleys to all the top roof purlins OR shackle to roof knuckle.

Step 2: Erect the framework.

Lift the first frame hoop to the vertical, holding it up by leaning onto the scissor braces which are Bolted to the top and bottom of the legs,

Put the curved hooks of the eave purlins of the first bay into the top hats of the first hoop's eave knuckle preparatory to erecting the next hoop.

Lift the second frame hoop to the vertical, securing it by lifting the other end of one eave purlin up and locating the square purlin hook into the second hoop's top hat.



The roof purlins are then lifted into position using the fork provided, it is advisable to do this working from one side of the hoop to the other, the second eave purlin being hooked up last. You can also put the 2 eave purlins in first (as shown) and then lift the others into place. This is not so easy on uneven ground.

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Bolt the second half of the braces into place on the second hoop's leg, effecting a cross.

Tension up the roof wires, using the Bottle screws supplied, it is useful to check that the frame is "square" before this point.

Erect subsequent bays to the overall length of the tent by repeating the procedure. Scissor braces (and roof wires) are required every fourth bay; the Scissor braces can be moved to adjacent bays if entrances are required.

Take the 4 flat Gable end ground rail plates with welded pins, remove the **R-Clips** from the **foot pins** on the 4 corner **legs**, slide one plate onto each **foot pin** with the welded pin facing outwards and replace the **R-Clips**.



Any remaining stakes should now be driven home.

Step 3: Put the roof onto the frame.

Throw the pulling ropes over the first bay to be roofed in and snap the clips onto the "D" rings at the leading edge of the roof covers; ensure the roof cover is the correct way up (i.e. the tensioning is facing down.). It is useful to use another rope (not supplied) to haul these pulling ropes over, avoiding the necessity of repeating the procedure every bay. This rope can then be clipped onto the roof cover and pulled over with it ready for the next bay.

Feed the leading edge of the roof sheets into the track feed, then into the channel in the roof beam, someone taking the tension on the pulling ropes from the other side of the frame.

Working together (although one person can it fairly easily), pull the roofs smoothly through the roof beams. It is essential that you pull the ropes at the same time or the covers may snag.

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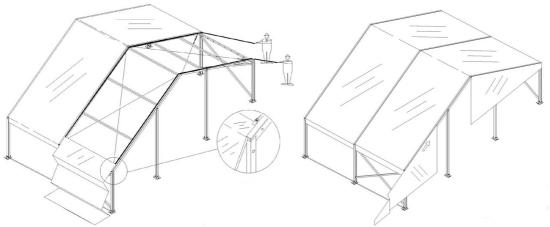
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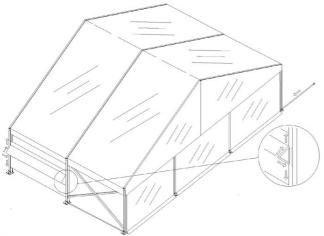
For Shockcord Tensioned roofs use the Shockcord and "S" hooks, locating them in the holes provided in the eave purlins and gable end eaves, pulling evenly.

For Bar tensioned roofs the procedure is to slide the tension bars through the pocket on the roof, Where the eye at the end of the rail meets the one from the next rail attach the hook of the ratchet strap, hooking the other end into the hole on the outside of the leg. Tighten ratchet strap evenly each side of roof. Repeat this at all the legs.

Whichever method is being employed, it is important that the roofs are tensioned evenly.

If the gables were not fitted at before lifting the end hoops, slide the gable ends into the top track of the end frames, lace together and tension down.

Step 4: Wall in the frame.





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Split the wall panels into their 2 halves, feed the keder into the upright channel using the slots provided. Ensure the ground rail pocket is to the outside of the tent.

Feed the keder pieces into the channel in the centre of the eave purlin and gable end eaves, sliding them along much like a curtain until they meet in the centre.

Join the 2 sections of the wall together by means of the eyes and laces or zip provided. Slide the ground rail into the pocket at the bottom of the wall and secure to the base plate pins. At the gable end use the bracket on the corners to pin the ground rails. The gable uprights have an adjustable foot to accommodate uneven ground.

Step 5: Inspect the tent and effect any necessary steps to make it secure

Ensure all stakes are driven home, pins all have "R" clips on them, roof wires are taut, ground rails pinned on, roofs tautened and fixed down.

Step 6: Install lining (if required)

Take the lining ridges and link them together using the connectors supplied along the centre line of the tent.

Fix the lining eave wire to the corner eave knuckles of the frame using the strops provided, making a loop in the end of the wire onto one of the tensioners with the wire grips provided. Run all the way round the perimeter of the tent and tension up.

Tie the trailing rope of he lining tackle onto the ridge at approximately 3m centres. Raise the lining ridge to about 1m from the ground and tie the other end to the eave. Tie the ridge line of the lining roof sections onto the ridge to the whole length of the tent, velcroing them together and ensuring the gable end triangles are in position.

Pull the lining ridge up to eave height (approx. 2.4m) and tie off.

Tie the lining joins onto the eave joints at the top of the uprights with a bow, fix the intermediate clips onto the wire as preferred. Pull the lining ridge up until the lining is taut. Hang the wall lining hooks on the eave of the roof lining or wire...

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WEATHER AND SAFETY - GENERAL

Relocatable aluminum beamed fabric structures have been used for decades. Even with millions of square feet of this and similar structures now in the world, the industry as whole has maintained an excellent safety record. The industry and the available inventory continues to grow. However, these structures are engineered for temporary use under the codes and may be frequently relocated, presenting safety issues that are uniquely different from more rigid permanent structures.

It is the customer's responsibility to ensure that the structure has been purchased and specified in accordance with the local codes having jurisdiction over the site on which the structure will be used. We suggest that code issues be dealt with early in the planning stages so that conformity can be considered through all phases of site preparations and structure installation, including proper anchoring for all weather and soil conditions of the site.

Barkers Marquees is responsible only for the product kit of parts delivered to the customer. It is the customer's responsibility to ensure that a ground anchoring system is used that meets the required code with the soil conditions present at the location. The IFAI Procedural Handbook for the Safe Installation and Maintenance of Tentage gives good additional advice on installations of tents and structures similar to that supplied by Barkers Marquees.

The IFAI also provides a reference on the "Pullout Capacity of Tent Stakes that should be consulted regarding temporary anchoring with tent stakes. Though Barkers Marquees stands behind the quality of its product, structures that are disassembled and reassembled should be inspected frequently for damaged or missing parts that could jeopardize the safety of the reinstallation. Fabric should be stored in a cool, dry location to prevent mildew that could compromise its integrity. Each installation should be supervised by a competent leader who is experienced and familiar with the proper assembly of components and the installation process. Proper installation procedures as outlined in this assembly manual should be followed diligently for each installation of the structure. At all times, installers should follow approved safety standards as it pertains to safety clothing such as hard hats, steel toed shoes and the proper use of tools and power equipment.

The structure has been engineered to meet appropriate code requirements. However, weather conditions vary drastically within small geographic locations. Heavywinds and microbursts can occur with almost pinpoint but unpredictable precision. Therefore, the customer should always err on the side of safety and evacuate the structure if there is any possibility that inclement weather could become a safety concern.

When used properly and safely, your structure should provide many years of satisfaction for your temporary shelter needs.

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RISKS INVOLVED IN BUILDING THE TENTS

Personal Protection Equipment

It is strongly recommended that all staff wear:

- ? Protective footwear at all times
- ? Hardhats for stages 1 to 4
- ? High vis tops if possible
- ? Gloves for handling framework
- ? Eye protection for driving stakes.

Risk Assessment:

? Material handling- ensure that when lifting the correct technique is used, many items are quite long so be careful when moving them around, always check your surroundings. Be careful not to drop any heavy frame. If items are wet or frozen special care needs to be taken.

Medium risk.

Actions required – Train staff in lifting techniques and awareness of their surroundings.

- ? Working at heights ensure all steps are locked into position and, when work at heights over 2.4m, are secured by a second person. If wet or frosted, ensure the steps are wiped down. Medium risk
- ? Use of sledge hammers wear eye protection, ensure that the hammer is gripped more than 150mm (6") from the head.

Low risk

Actions required – wear protective footwear and eye protection, train staff in use of hammers

? Trips – take care when moving around the area, especially when items are on the ground. If wet or frosted, extra care needs to be taken.

Medium risk

Actions required – Be aware of your surroundings, don't leave items in dangerous postions

? Access – good access to all sides of the tent is required, if not available, ensure that proper care is taken – especially when working at heights.

Low risk

Actions required – wear gloves and maintain equipment

? Cuts and abrasions – the frame can become worn and swarf may be present when new. We

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recommend using protective gloves when handling framework and ropes to prevent cuts and abrasions. A regular check of equipment is also recommended to deal with damaged edges, rubbing down with a file when required.

Medium risk

Actions required – ensure all staff wear gloves when handling framework and check equipment

COSH:

The materials used in Frame tents have no appreciable risks.

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