



SAFETY AT THE HIGHEST LEVEL

Kee Dome Operation & Maintenance Manual





Kee Dome Overview



INTRODUCTION

The Kee Dome® range of modular systems has been designed specifically to prevent falls through rooflights.

UNIQUE DESIGN

These innovative products provide protection for personnel accessing near to fragile rooflights whilst carrying out maintenance or inspections on a flat roof.

The unique freestanding design means that fragile rooflights can now be quickly and easily protected.

VERSATILE

The Kee Dome® uses recycled PVC bases which lock the posts into position around the perimeter of the rooflight. Kee Klamp® fittings and standard length tubes (1.5 (5'), 2.0 (6'6"), & 3.2m (10'6")) (1.2 (4') & 1.8 (6') Kee Dome Mini) are used to construct a rigid frame around the rooflight.

ACCESS & EGRESS

Kee Dome® may be used to protect roof hatches and a self closing gate can be included in the design to permit access to a protected roof hatch. The gate is available in left or right hand options.

PORTABILITY

The Kee Dome® range has been designed in component form to ensure that it can be easily transported both to site and up to roof level.

PERMANENT/TEMPORARY

This versatile product can serve as either a temporary or permanent installation as no fixings are required to either the fragile rooflight or roofing membrane.

DURABILITY

The Kee Dome® range is supplied with a galvanised finish carried out to BS EN ISO 1461 : 1999 Hot Dip Galvanised Coatings. Specification and Testing Methods, giving an average coating of 40 microns.

TESTING & CERTIFICATION

The Kee Dome® System has been tested to EN 14122

The Kee Dome® Mini has been externally tested to the criteria and loadings taken from the ACR Red Book Test For Non-Fragility of Roof Assemblies.

The test involved a 45kg (100lbs) weight free falling a distance of 1.2m (4') to reach a maximum velocity. The Kee Dome® Mini arrested the load via deformation of the wire mesh panel and with no penetration of the wire mesh.



ROOF MEMBRANE PROTECTION

The Kee Dome® range uses recycled PVC bases which are the only components in contact with the roof membrane.

This insulating material protects the roof from damage via heat transfer from the steel components.

OFFICIAL DOCUMENTATION

Work at Height Regulations
HSG 33 Health & Safety in Roof work
ACR Red Book Test For Non-Fragility of Roof Assemblies
Workplace (Health, Safety and Welfare) Regulations

TECHNICAL BULLETIN

Polycarbonate Rooflights – Are they fragile?

Generally speaking polycarbonate rooflights are deemed to be non-fragile for the “construction phase” of a project. Once the project is handed over they are deemed as fragile due to the following:-

Non-fragility is dependent not only on the strength/durability of the rooflight material itself, but on all aspects of installation of an assembly. This may be compromised even if there is no loss of strength of the rooflight material. This is particularly true for in-plane rooflights.

Whilst polycarbonate is an extremely strong and very durable material, there are some things that can cause dramatic and very premature failure – for example, plasticisers attack polycarbonate, so contact with plastisol coated steel or, worse, PVC tape (which contains much higher levels of plasticisers) will cause premature failure; permanent stresses in the material, certain chemicals, trapped water which can heat up can also all accelerate degradation.

Industry interest groups would never recommend that non-fragility of any rooflight should be guaranteed in the long term, due to lack of control over the various factors other than strength of the rooflight that may affect non-fragility, but this is particularly true with polycarbonate where strength of the rooflight itself can be compromised if not treated correctly.

PRODUCT CODES AND DESCRIPTIONS

KEE DOME

Product Code	Description
KDH1	3m x 1.5m (10' x 5") Kit
KDH3	2m x 1.5m (6'6" x 5') c/w gate kit
KDK2	2m x 2m (6'6" x 6'6") kit
KDK3	4m x 2m (13' x 6'6") kit

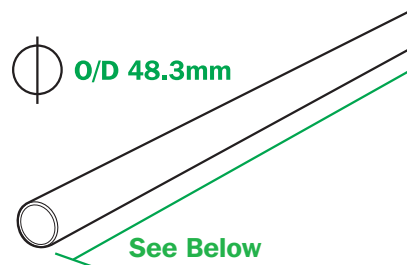
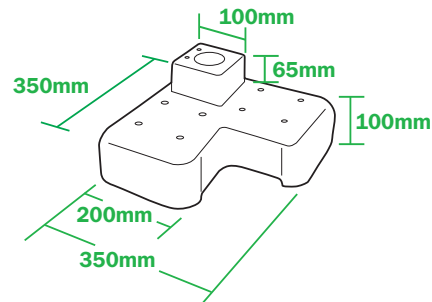
KEE DOME MINI

Product Code	Description
KDK12	1.2m x 1.2m (4'x4') c/w mesh kit
KDK18	1.8m x 1.8m (6'x6') c/w mesh kit



PVC BASE - 250-8

Recycled PVC base provides the support for the Kee Dome® Vertical Standards.
Material : Recycled PVC Net weight : 8.3kg.

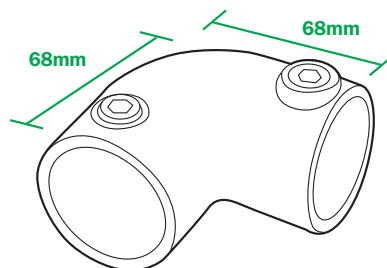


GUARDRAIL TUBING - 8610

Standard lengths supplied 1.5, 2.0, & 3.2m. O/D 48.3mm : Wall thickness 3.2mm.
Material : Galvanised steel to BS EN ISO 1461. Net weight : 5.5kg, 7.4kg, 11.8kg.

VERTICAL STANDARD TUBING - 8610

Standard length 1.1m. O/D 48.3mm : Wall thickness 3.2mm.
Material : Galvanised steel to BS EN ISO 1461. Net weight : 4kg.



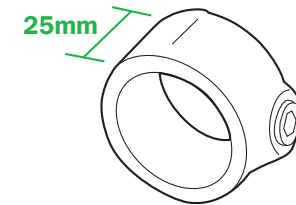
90° ELBOW - 15-8

This provides the means of dealing with corners and changes in level.
Material : Malleable cast iron to BS 1562 and galvanised to BS EN ISO 1461. Net weight : 0.77kg.



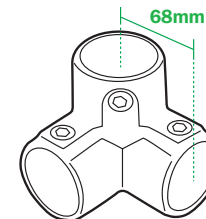
COLLAR - 75-8

This component inserts into the slot of the recycled PVC Counter Weight. The Vertical Standard tube is pushed through this fitting and the grub screw is then tightened.
Material : Malleable cast iron to BS 1562 and galvanised to BS EN ISO 1461. Net weight : 0.19kg.



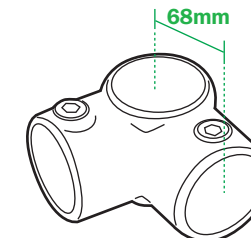
90° SIDE OUTLET ELBOW - 20-8

This fitting is used to connect the top Guardrail and Vertical Standard at each corner.
Material : Malleable cast iron to BS 1562 and galvanised to BS EN ISO 1461. Net weight : 1.2kg.



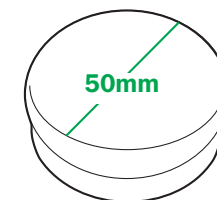
90° SIDE OUTLET TEE - 21-8

This fitting is used to connect the Intermediate Guardrail and Vertical Standard at each corner.
Material : Malleable cast iron to BS 1562 and galvanised to BS EN ISO 1461. Net weight : 0.85 kg.



PLASTIC PLUG - 77-8

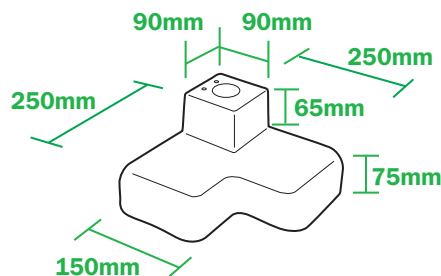
This component is fitted to the top of the Vertical Standard Tubing.
Material : PVC. Net weight : 0.009kg.





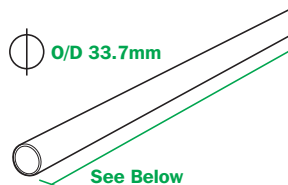
PVC BASE - 250-6

Recycled PVC base provides the support for the Vertical Standards.
Material : Recycled PVC Net weight : 3.7kg.



PRIMARY TUBING - 6110

Standard lengths supplied 1.2 & 1.8m. O/D 33.7mm : Wall Thickness 4.3mm.
Material : Galvanised steel to BS EN ISO 1461. Net weight : 2.8kg & 4.1kg.

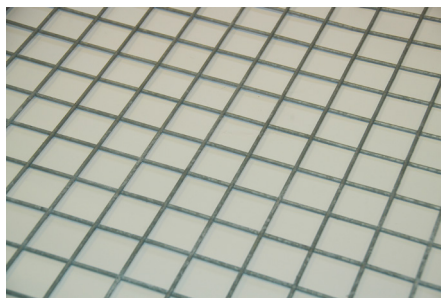


SECONDARY TUBING - 6110

Standard lengths supplied 1.26 & 1.86m. O/D 33.7mm : Wall thickness 4.3mm.
Material : Galvanised steel to BS EN ISO 1461. Net weight : 2.9kg & 4.3kg.

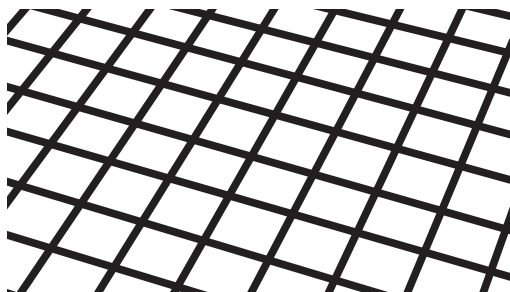
VERTICAL STANDARD TUBING - 6110

Standard length 600mm. O/D 33.7mm : Wall thickness 4.3mm.
Material : Galvanised steel to BS EN ISO 1461. Net weight : 1.4kg.



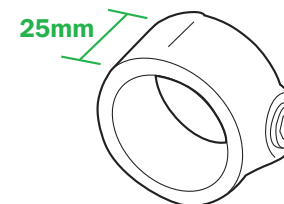
MESH PANEL -

This component lays on top of the Secondary Tubing and is attached on two sides to the Primary Tubing via the Single Sided Clips. Mesh panel 50mm x 50mm x 3.2mm is cut to size on site.
Material : Galvanised steel to BS EN ISO 1461. Net weight : 4kg.



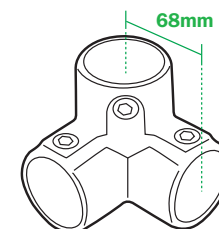
COLLAR - 75-6

This component inserts into the slot of the recycled PVC Counter Weight. The Vertical Standard tube is pushed through this fitting and the grub screw is then tightened.
Material : Malleable cast iron to BS 1562 and galvanised to BS EN ISO 1461. Net weight : 0.13kg.



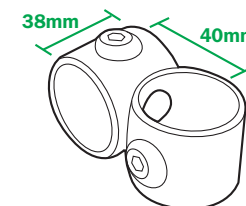
90° SIDE OUTLET ELBOW - 20-6

This fitting is used to connect the Top Guardrail and Vertical Standard at each corner.
Material : Malleable cast iron to BS 1562 and galvanised to BS EN ISO 1461. Net weight : 0.48 kg.



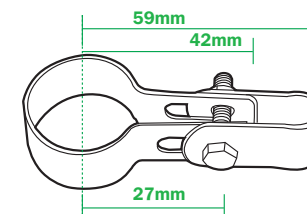
CROSS OVER - 45-6

This component provides the method of linking the horizontal Primary & Secondary Tubing.
Material : Malleable cast iron to BS 1562 and galvanised to BS EN ISO 1461.
Net weight : 0.34kg.



SINGLE SIDED CLIP - 81-6

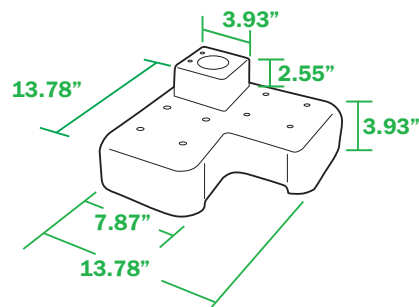
This component is used to attach the wire mesh to the Primary Tubing. Clips are used on two opposite sides (5 clips per side). All clips are supplied with a M6 x 35mm nut and bolt.
Material : Galvanised steel to BS EN ISO 1461. Net weight : 0.70 kg.





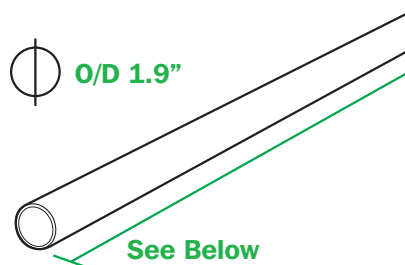
PVC BASE - 250-8

Recycled PVC base provides the support for the Kee Dome® Vertical Standards.
Material : Recycled PVC Net weight : 18lb 4oz.



GUARDRAIL TUBING - 8610

Standard lengths supplied 4', 6' & 10'6". O/D 1.9" : Wall thickness 0.126".
Material : Galvanised steel to ASTM A53. Net weight : 12lb 2oz, 16lb 5oz & 26lb.



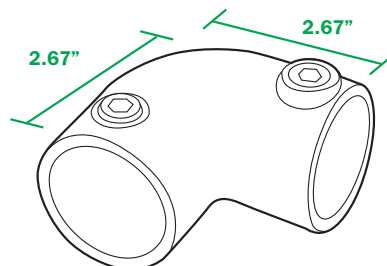
VERTICAL STANDARD TUBING - 8610

Standard length 3'7". O/D 1.9" : Wall thickness 0.16".
Material : Galvanised steel to ASTM A53. Net weight : 8lb 10oz



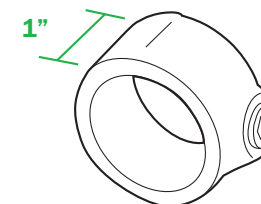
90° ELBOW - 15-8

This provides the means of dealing with corners and changes in level.
Material : Malleable cast iron to ASTM A47-77-32510 and galvanised to ASTM 153. Net weight : 1lb 11oz.



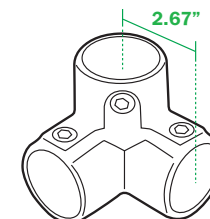
COLLAR - 75-8

This component inserts into the slot of the recycled PVC Counter Weight. The Vertical Standard tube is pushed through this fitting and the grub screw is then tightened.
Material : Malleable cast iron to ASTM A47-77-32510 and galvanised to ASTM 153. Net weight : 7oz.



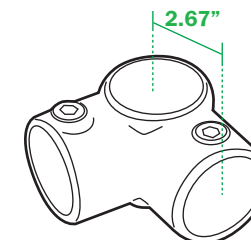
90° SIDE OUTLET ELBOW - 20-8

This fitting is used to connect the top Guardrail and Vertical Standard at each corner.
Material : Malleable cast iron to ASTM A47-77-32510 and galvanised to ASTM 153. Net weight : 2lb 10oz.



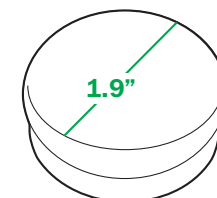
90° SIDE OUTLET TEE - 21-8

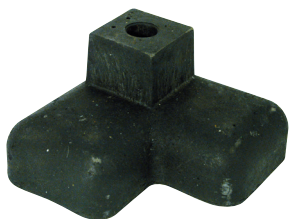
This fitting is used to connect the Intermediate Guardrail and Vertical Standard at each corner. Material : Malleable cast iron to ASTM A47-77-32510 and galvanised to ASTM 153. Net weight : 1lb 14oz.



PLASTIC PLUG - 77-8

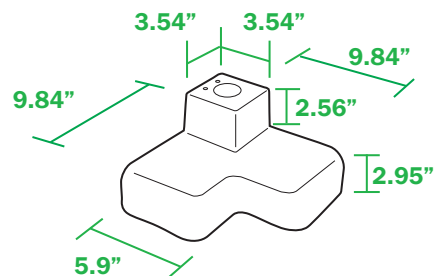
This component is fitted to the top of the Vertical Standard Tubing.
Material : PVC. Net weight : 1/3oz.





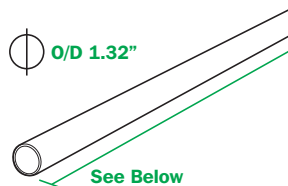
PVC BASE - 250-6

Recycled PVC base provides the support for the Vertical Standards.
Material : Recycled PVC Net weight : 8lb 2oz.



PRIMARY TUBING - 6110

Standard lengths supplied 4' 1" & 6'. O/D 1.32" : Wall Thickness 0.169".
Material : Galvanised steel to ASTM A53. Net weight : 6lb 3oz & 1lb.

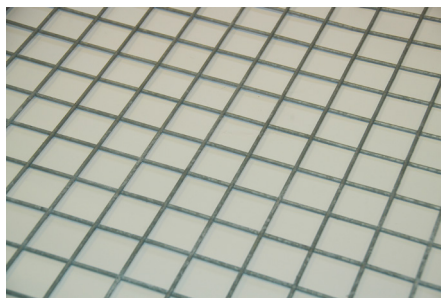


SECONDARY TUBING - 6110

Standard lengths supplied 4' 1" & 6' 1". O/D 1.32" : Wall thickness 0.169".
Material : Galvanised steel to ASTM A53. Net weight : 6lb 6oz & 9lb 7oz.

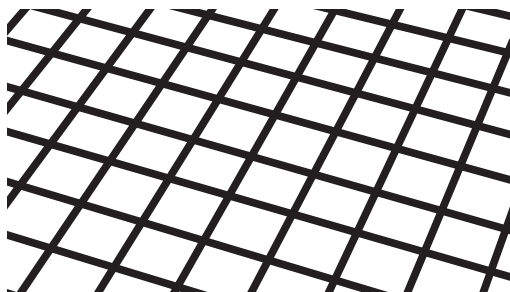
VERTICAL STANDARD TUBING - 6110

Standard length 2'. O/D 1.32" : Wall thickness 0.169".
Material : Galvanised steel to ASTM A53. Net weight : 3lb.



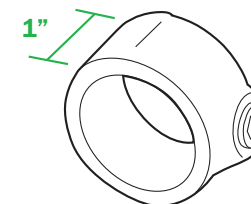
MESH PANEL -

This component lays on top of the Secondary Tubing and is attached on two sides to the Primary Tubing via the Single Sided Clips. Mesh panel 2" x 2" x 0.13" is cut to size on site.
Material : Galvanised steel to ASTM A53. Net weight : 8lb 13oz.



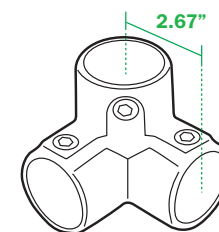
COLLAR - 75-6

This component inserts into the slot of the recycled PVC Counter Weight. The Vertical Standard tube is pushed through this fitting and the grub screw is then tightened.
Material : Malleable cast iron to ASTM A47-77-32510 and galvanised to ASTM 153. Net weight : 5oz.



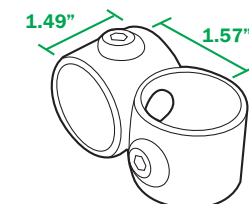
90° SIDE OUTLET ELBOW - 20-6

This fitting is used to connect the Top Guardrail and Vertical Standard at each corner.
Material : Malleable cast iron to ASTM A47-77-32510 and galvanised to ASTM 153. Net weight : 1lb.



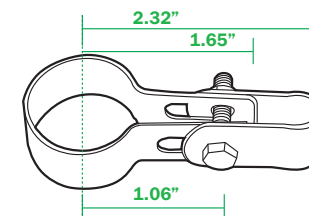
CROSS OVER - 45-6

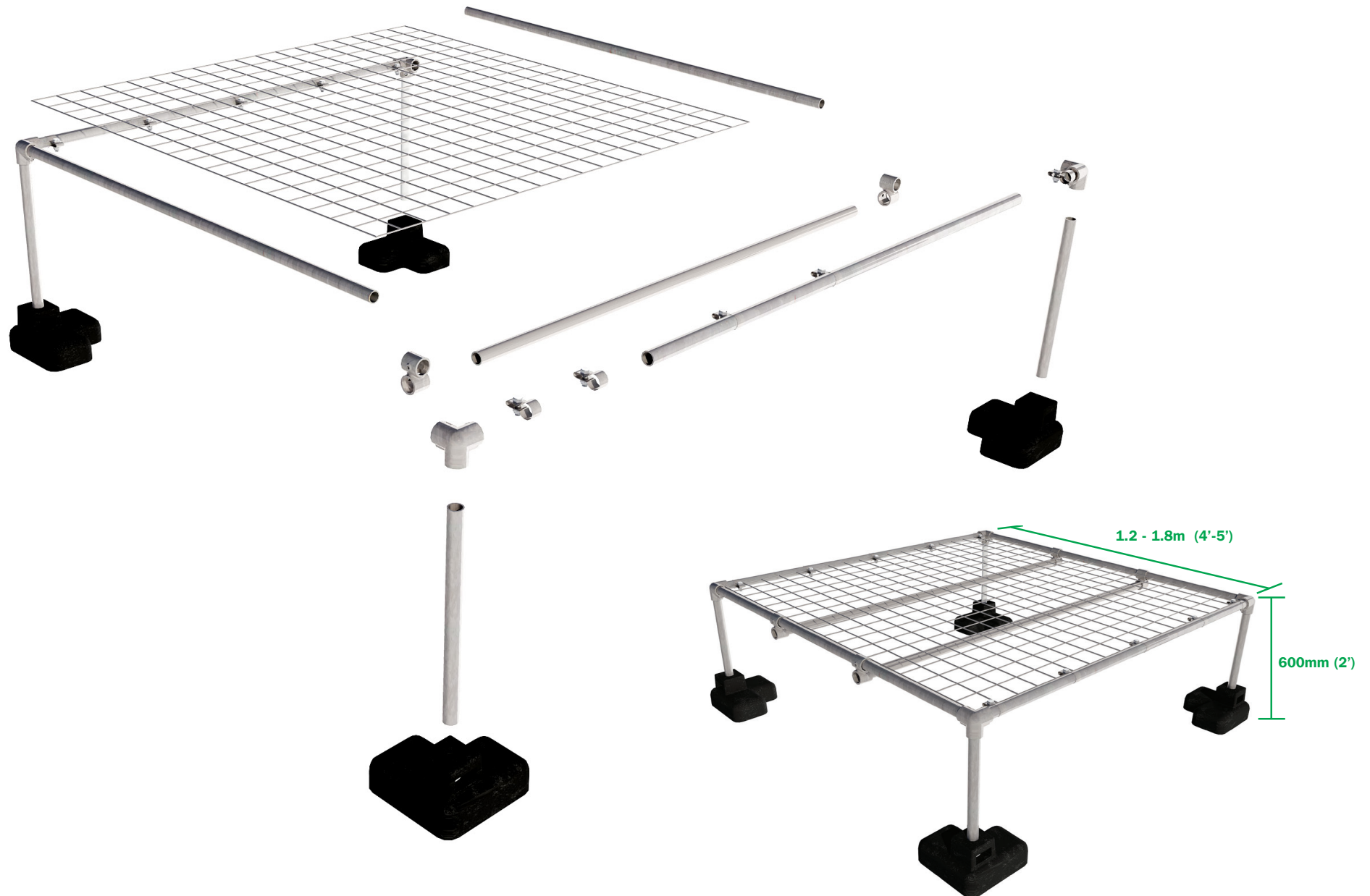
This component provides the method of linking the horizontal Primary & Secondary Tubing.
Material : Malleable cast iron to ASTM A47-77-32510 and galvanised to ASTM 153.
Net weight : 12oz.



SINGLE SIDED CLIP - 81-6

This component is used to attach the wire mesh to the Primary Tubing. Clips are used on two opposite sides (5 clips per side). All clips are supplied with a 0.25" x 1.37" nut and bolt.
Material : Galvanised steel to ASTM A53. Net weight : 1lb 5oz.





Kee Dome & Kee Dome Mini Recertification

- Periodic inspections by a competent person are recommended by the manufacturer. In UK/Europe these are required under Regulation 5 of the Workplace (Health, Safety & Welfare) Regulations, the Work at Height Regulations and BS EN 365. The frequency will depend upon the environment, location and usage but should be at least every 12 months.
- Visually inspect the complete installed assembly in relation to the general client's needs. Establish if any modifications and/or additional products are required to reflect any refurbishment requirements or additional plant & equipment which have been installed and require access.
- Check installation is complete as per the original installation drawing/plan.
- Ensure the Kee Dome has not been modified or tampered with by unauthorised persons.
- Check tubular assembly and all fittings for distortion, dents or cracks.
- Check all recycled PVC bases are in contact with the roof membrane.
- Check all grub screws are in place, greased and sufficiently torqued.
- Check the height and level of the Kee Dome.
- If fitted, check gate assembly and ensure correct operation.
- Any galvanised components showing signs of corrosion should be wire brushed thoroughly and galvanised spray/paint applied as appropriate. If rusted significantly, take digital photographs and include these in the inspection report.
- Check system plaque (where applicable) position & mark up to reflect date of the next required inspection. Establish if additional plaques are required due to any refurbishment works.





Kee Safety Shanghai

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