

# Hall Stage

PURVEYORS OF INNOVATIVE ENGINEERING SINCE 1898

## T60 TRACK



THE ORIGINAL T60  
CURTAIN TRACK  
FROM HALL STAGE



With thousands of miles of operational systems installed all over the world, T60 Track is a standard-setting product range with a proven record.

Delivering great value, with reliable and dependable performance every time, T60 track is designed to meet the exact requirements of any stage.

Built with the entertainment industry in mind, T60 can be supplied from stock or custom-made to fit your stage...wherever it is.

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## T60 TRACK

### APPLICATION

Medium duty track used in a wide range of stage and studio applications.

### CAPACITY

- Wheeled runners 20kg capacity, one runner per 300mm of curtain length recommended.\*
- Optional ball raced runners 25kg capacity.\*
- All T60 track systems and components have been load and destruction tested and function perfectly with a 50kg-imposed load, with only 2mm distortion over a 1.5m unsupported span.

### TRACK FORMS/CONFIGURATIONS

- Wide range of configurations:
- Straight Lengths 250mm - 3000mm
- Curved: sections from 0.5m radius.

### FINISH

Black epoxy powder coat finish minimizing reflection. Other colours and finishes available on request.



T60 Switch Point

Please refer to the current price list or track pricer for COMPLETE TRACK KITS and all available components.

Full specifications of the T60 track range and other fine stage and theatre products may be obtained from our web site as downloadable product data sheets

For more information visit: [www.hallstage.com](http://www.hallstage.com) or enquire via e-mail: [sales@hallstage.com](mailto:sales@hallstage.com)

In line with a programme of continued product development and improvement, Hall Stage Limited reserve the right to vary the specification, design or construction of any products/equipment described or offered for sale, or to withdraw or replace products/equipment without prior notification or public announcement.

\*Always check that runner loading does not exceed track capacity.

### OPERATION

Walk along, hand line, hand winch or with dynaglide curtain controller. Rearfold system options for hand or electric traverse systems.

### FIXING OPTIONS

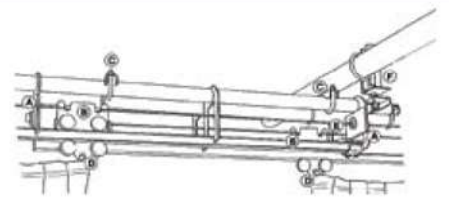
A wide range of fixing kits are available to support track from suitable structures. One fixing every 1.5mtrs is recommended. The descriptions below are for standard fixing options. For further alternatives please contact us with your requirements.

- Universal clamp, used to support track from wooden joist, provides track attachment to other fixings via M10 stud.
- Face Fixing Bracket to fix track to adjacent wall or proscenium opening.
- Girder Fixing Clip to suspend track from steel girder widths between 75mm and 150mm.
- Tube Fixing Clip to suspend track from horizontal pipe of 38mm, 48mm or 60mm diameter.
- Deadline Suspension Hanger to suspend track directly from a suitable support via 4mm cable.
- Barrel Fixing Clip to suspend single track lengths directly below and parallel to barrel with 38mm, 48mm or 60mm diameter.
- "Z" Brackets to suspend overlapped tracks directly below and parallel to barrel with 38mm, 48mm or 60mm diameter.

### ADVANCED FEATURES

The T60 Track can be custom built to suit your specific requirements.

- Scenery Carriers can be used to move significant loads on all Hall Stage tracking systems.
- Swivel Arm Carriers can be used to move and swivel curtain legs.
- Beam Track. T60 Track can be strengthened and flown with a motor unit by adding a beam to the spine.
- Switch Points are used to transfer curtains between tracks and are available in manual (remote or local control) or electric operation in a variety of track configurations.
- Diversions: All operating systems can be diverted using pulley systems to allow the control of your track to be positioned as required.



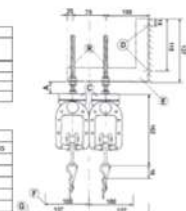
**Figure 1 Key**

A	Line Guides	01193
B	Wheeled Runner / Slider master straight track	03750
C	Overlap Clips	03291
D	Trolleys	03376
E	Stop Brackets	05730
F	Tube Fixing Clip 48mm	03136

**Figure 2 Key**

A	Degrees of adjustment between 16mm - 100mm
B	Stud Bolts 10mm dia in 150mm and 300mm lengths
C	Universal Fitting
D	10mm dia bolt holes
E	Face Fixing Bracket 150mm reach (inner track)
F	Recommended clearance for track
G	Recommended clearance for curtains

All dimensions in mm





The T-60 Curtain Track is designed to meet the requirements of most small and medium sized stages.

The method of working this curtain track may be either by electric controller, handwinch, handline or walkalong method.

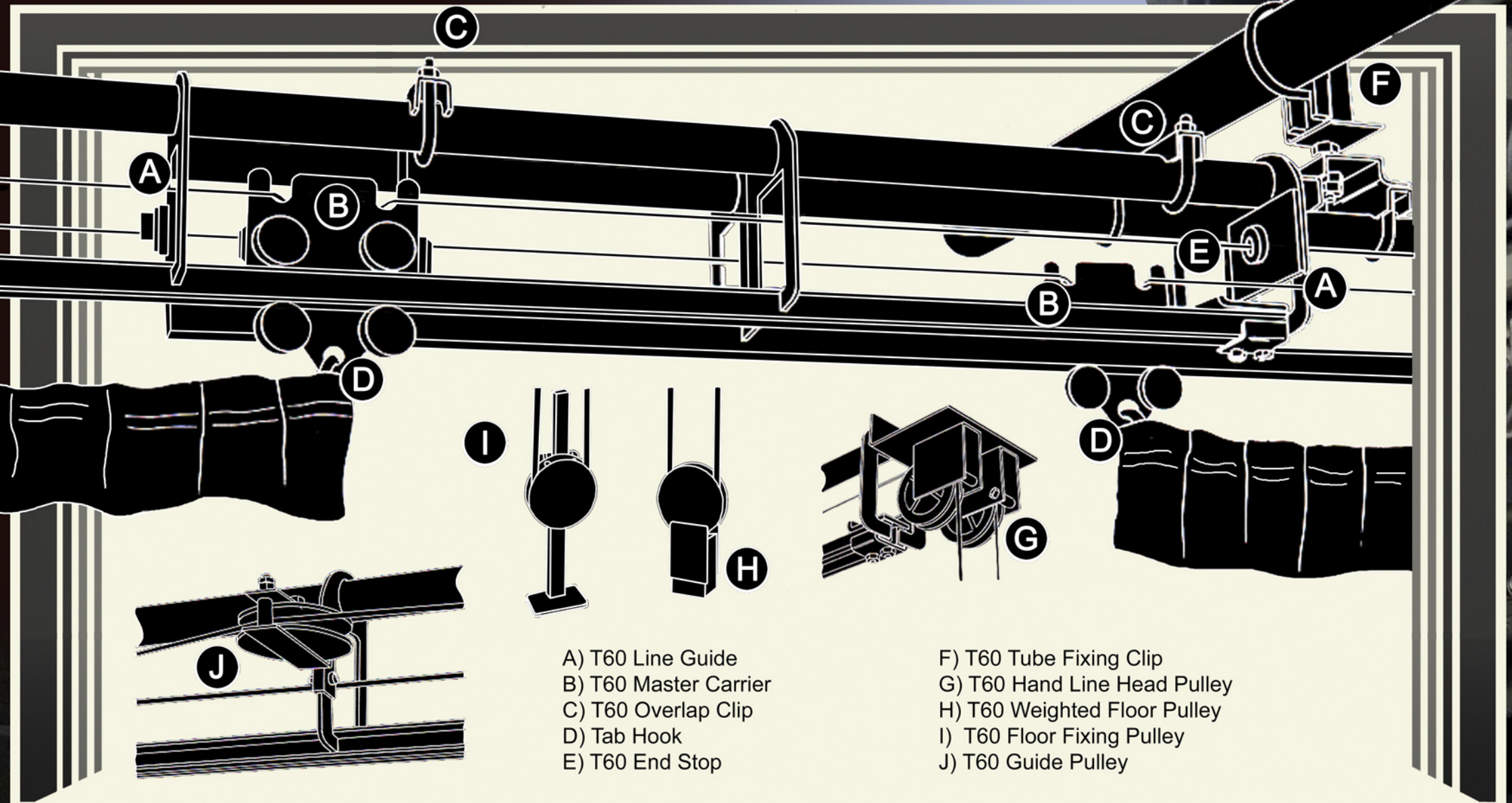
Manufactured from steel and electrically welded - the track is designed to allow a wide variety of configurations to be assembled at stage level with the various components, hauling line and fittings attached, ready to be hoisted and fixed in its working position.

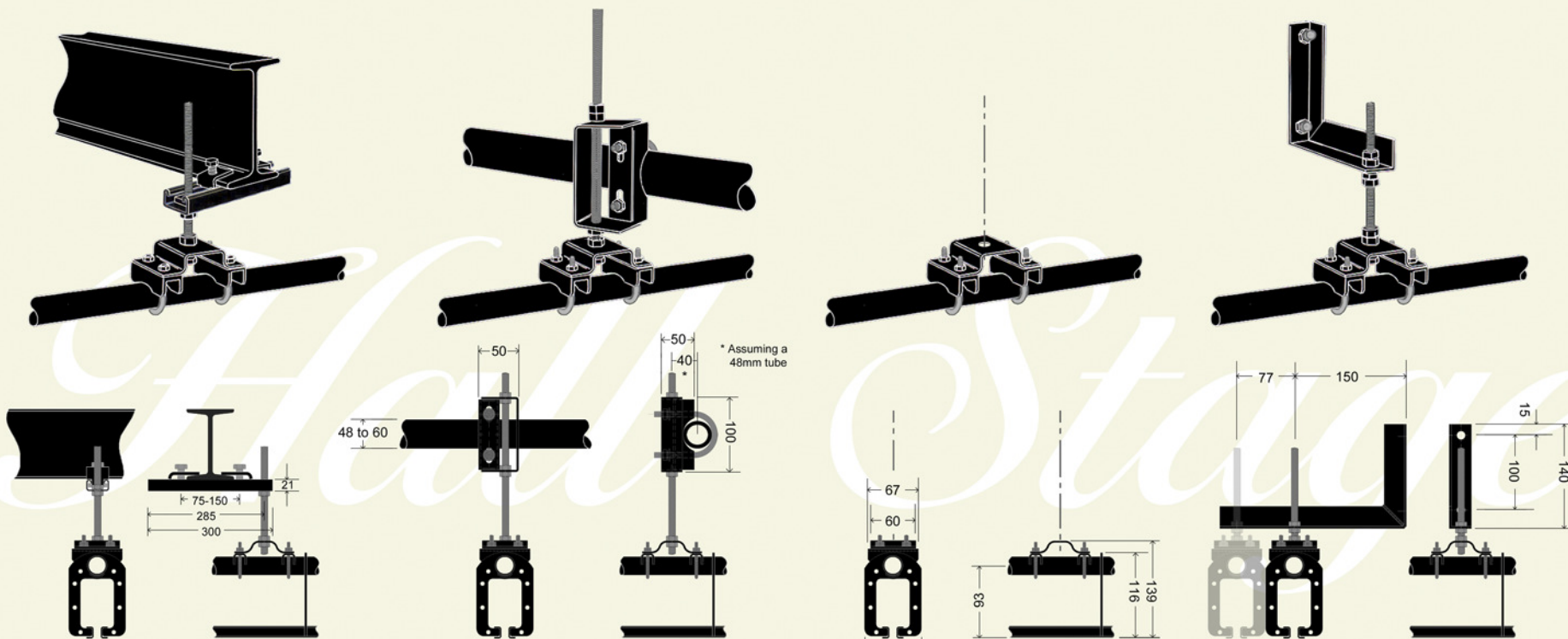
A range of suspension fittings are manufactured for use with the T-60 track. In most cases these allow for final height adjustment. All suspension fittings should be spaced at intervals not exceeding 2.25m along the length of the track.

The maximum recommended length of the T60 Curtain Track is 18m for overlapping track and 9m for single tracks, with a maximum carrying capacity per carrier of 4 Kilo each.

T-60 tracks are also available fitted with ball raced wheeled runners and leaders, which increases the load capacity of each runner to 6 Kilo.







176mm minimum from underside of girder to under side of track with stud fully closed

Universal Girder Fixing Clamp designed to clamp to a flange between 75mm & 150mm wide. Accepts M8, M10 or M12 stud

205mm minimum from centre of tube to under side of track with stud fully closed

Tube Fixing Clip is used to suspend track at any horizontal angle below a 48mm or 60mm tube. Use with a 300mm stud if height adjustment is required.

The T60 Universal Clamp is used to fix track to soffits, timber joist or ceilings via a 10mm Coach Screw / M10 Rawl Bolt, or will accept an M10 stud for connection to most other T60 fixing units.

155mm minimum from underside of bracket to under side of track with stud fully closed

T60 Face Fixing Bracket Used to support a T60 single or overlapped curtain track from a vertical surface. Used in conjunction with an M10 stud bolt and T60 universal clamp.

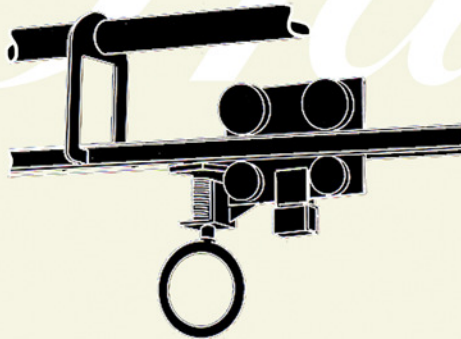


## Special Carriers

We are able to fabricate any carrier to suit any of our range of curtain tracks to carry lights, camera equipment, welding curtains etc.

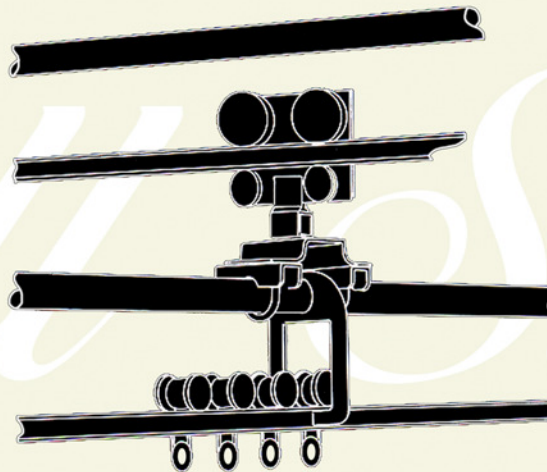
Working of the special carriers may be by all the standard methods - electric controller, hand-winch, hand-line or walk-along.

Both straight and curved tracks are suitable for use with special carriers.



Ball-raced carrier with internal spring lock for carrying lights etc. A hook pole is used to pull down the sprung ring thus enabling the unit to be moved to any position.

## Track Carrying Carriers

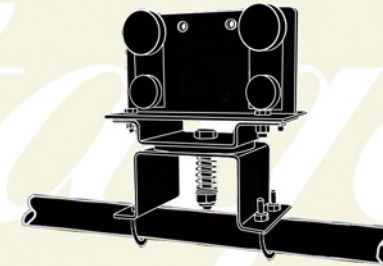


Ball raced carrier to support tracks running up-down stage.

The range of loadings that can be carried is dependant upon the span that the track is fixed at, but any modification can be made to either the track fabrication or the carrier to enable virtually any normal load to be used.

## Swivel & Scenery Carriers

Swivel arm carriers are commonly used in schools and theatres alike. These heavy duty carriers can be supplied with a brake or can be modified for use on hand-line or electric curtain tracks.



Scenery Carriers

Hall Stage produce a range of ball raced scenery carriers with pivoting forks to suspend scenery flats.

Please talk to our sales team for more details on any of our special carrier solutions.



### T60 Modular Track Clip Application:

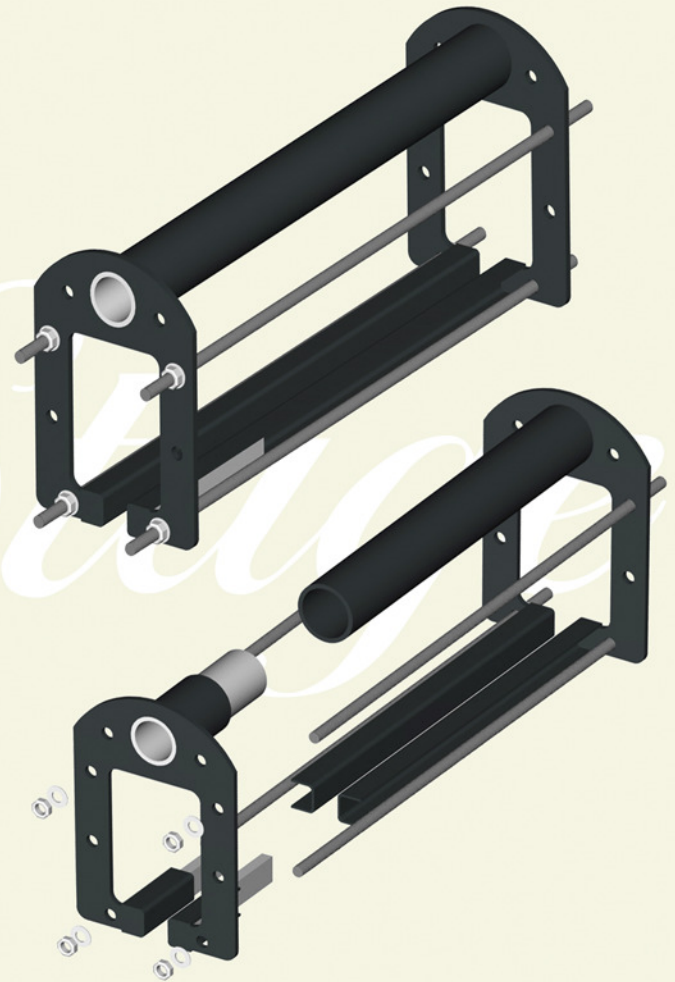
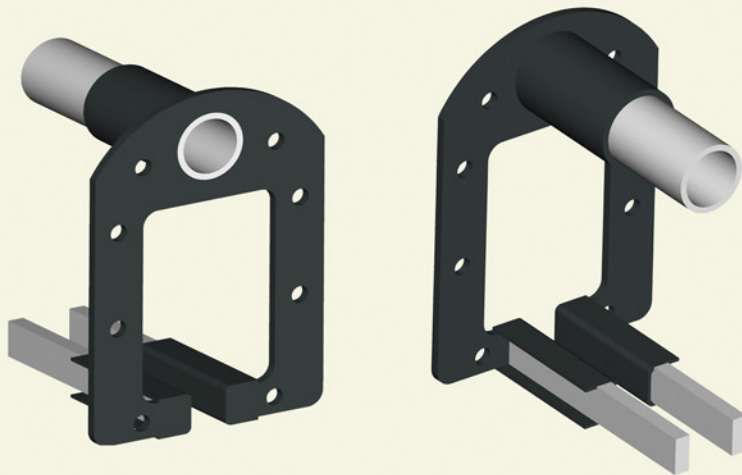
The T60 Modular Track Clip allows T60 track sections to be cut to length on site. It easily attaches to the cut end of a track section using an Anaerobic adhesive, as used in the building of the Lotus Elise and many other high-performance cars.

The joining methods have been destruction tested to 50 x operational loading capacity, with only negligible deflection.

The adjusted track section can be used in any application that a standard track section could be – even in the middle of a track assembly.

Once attached the new track section will continue to have the same functionality and will be almost indistinguishable from an original track section.

The Modular Track Clip is a highly effective tool for anybody installing, altering or holding stock of the T60 Tracking system.

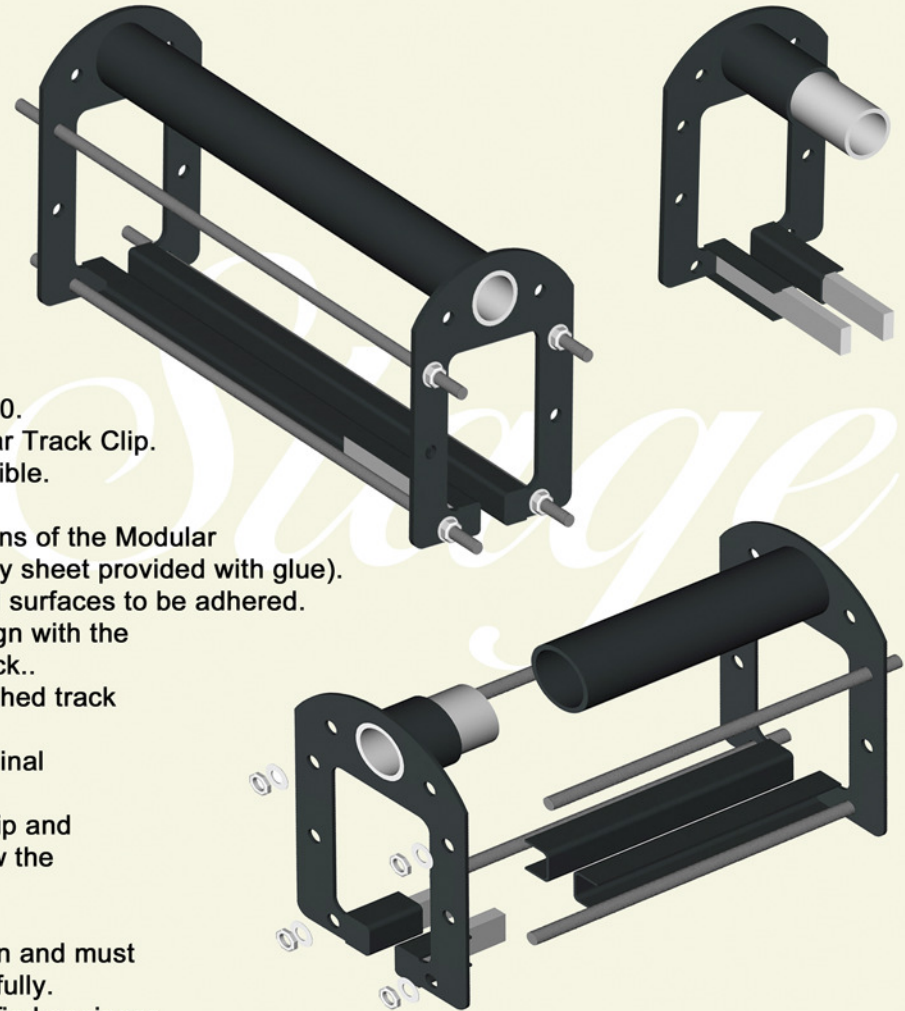


### T60 Modular Track Clip Details:

- > For use on site when track sections need to be reduced in length
- > Forms structural end to cut down T60 section.
- > Can be fitted and ready to use on site in under 30 minutes
- > Can be loaded with runners, Scenery Carriers, header Pulleys & diverters, up to 75% capacity of original track section.
- > Anaerobic adhesive will only 'set' in the absence of oxygen, so any unwanted areas of adhesive can be easily wiped clean.

### Installation Instructions:

- > Measure the length to be removed from the original straight section of T60.
- > Remove an additional 40mm from the track length to allow for the Modular Track Clip.
- > Insure that the cut through the original track section is as square as possible.
- > Remove all burrs.
- > Coat the circumference of the spigot and the three sides of the flat sections of the Modular Track Clip using the anaerobic adhesive provided. (Please read the safety sheet provided with glue).
- > Care should be taken to ensure there is good glue coverage on the metal surfaces to be adhered.
- > Offer up the Modular Track Clip so that the spigot and channel blocks align with the cut section of track and slide together to form a continuous section of track..
- > Note: The gluing process is essential to the structural integrity of the finished track section
- > The Modular track clip should be slotted firmly into the cut end of the original track section.
- > The 4 x M5 Studs provided should be slotted trough the Modular track Clip and fastened to the next track clip (as shown above). This will clamp the allow the adhesive to set in the correct alignment.
- > After 30 minutes the track can be installed, Studs must remain in place.  
The studding will fix through the fixing holes on the adjoining track section and must remain in place for a minimum of 24 hours to allows the adhesive to set fully.
- > After installation the track should be tested and commissioned by a qualified engineer.



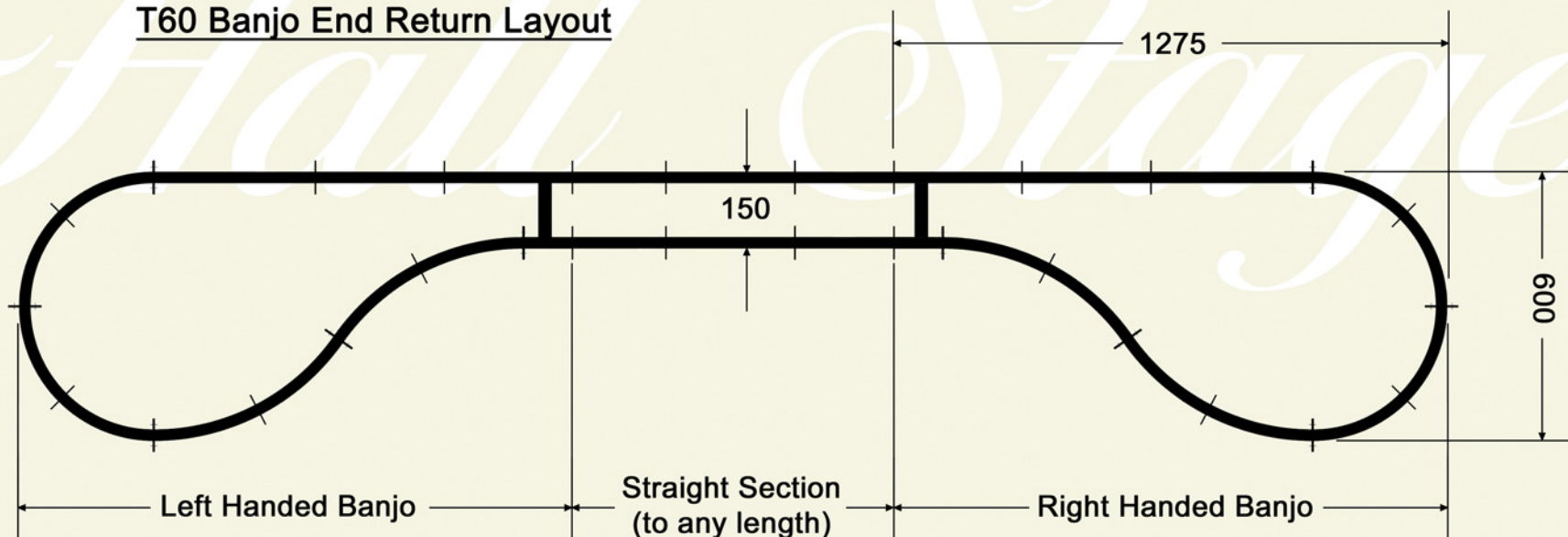


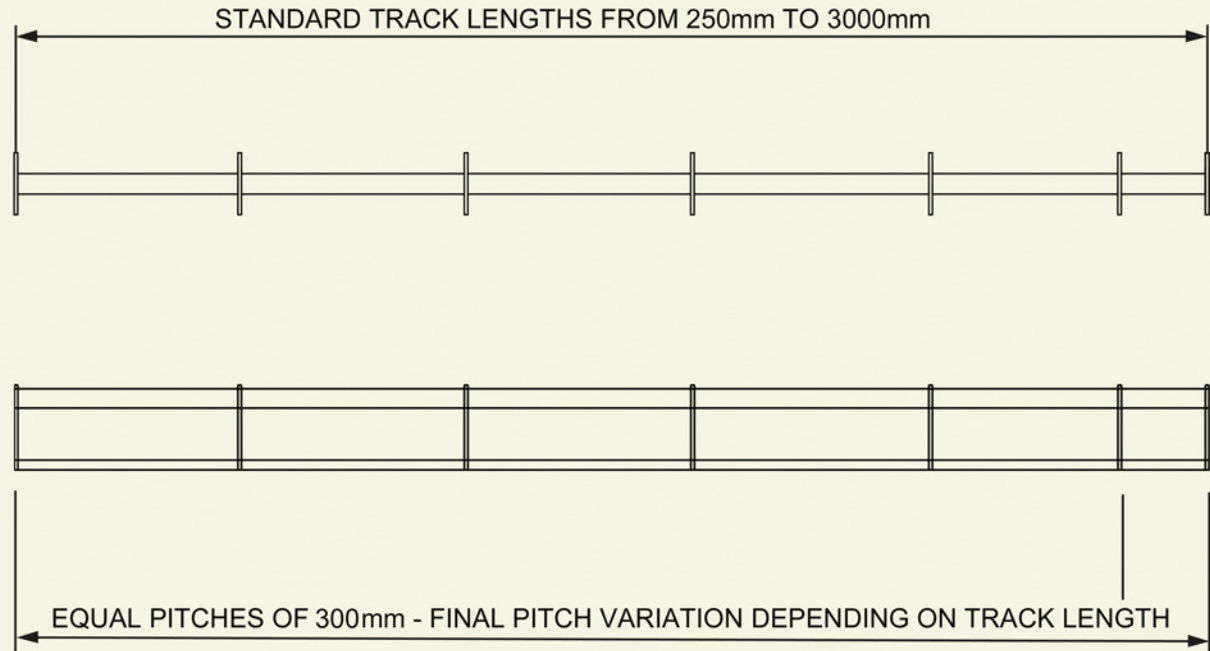
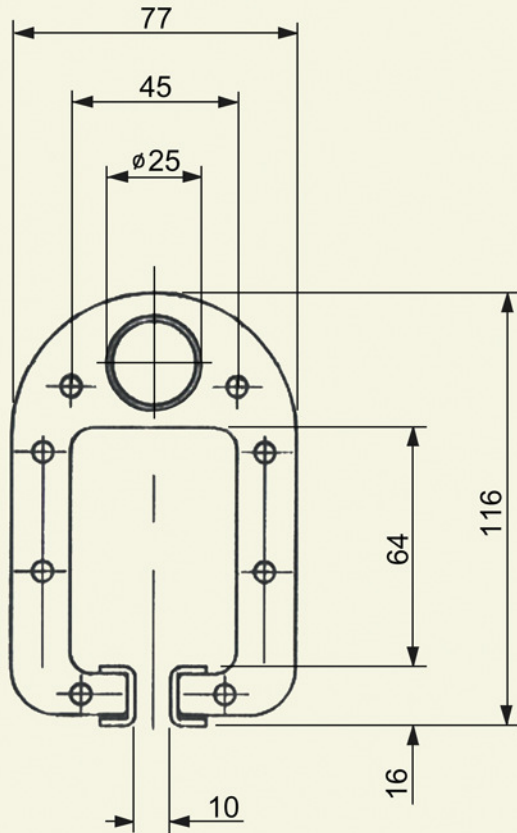
The T60 Banjo End Return can be used in a number of situations. It is most commonly used to reverse a double sided curtain or in situations where a number of differing curtains need to be swapped in and out in a tight area. The Banjo End Return is also useful when trying to stack a high volume of curtains into a small space.

Banjos can be supplied left or right handed and are often used in pairs. They are only suitable for walk along operation tracks.



T60 Banjo End Return Layout





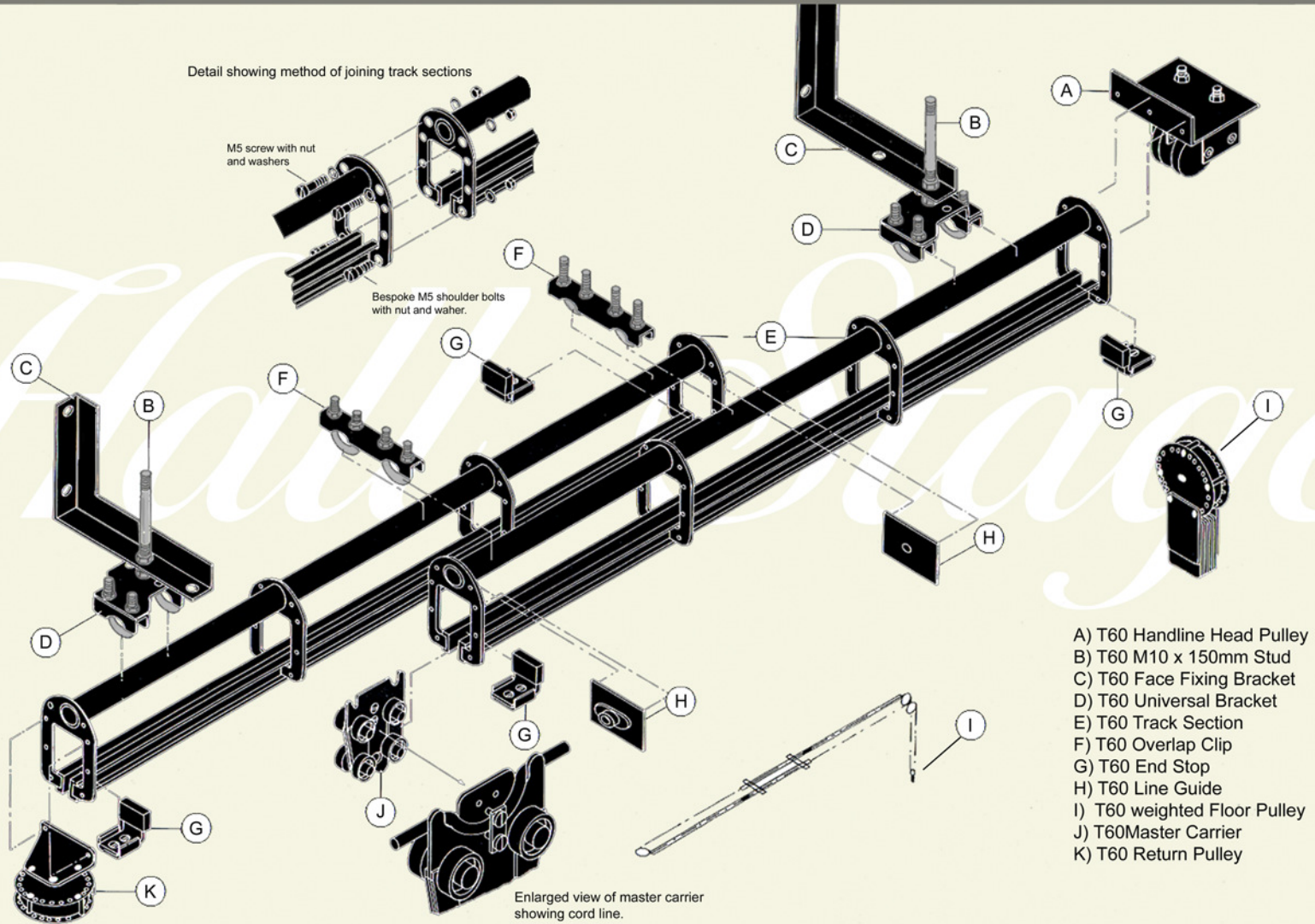
All dimensions in mm

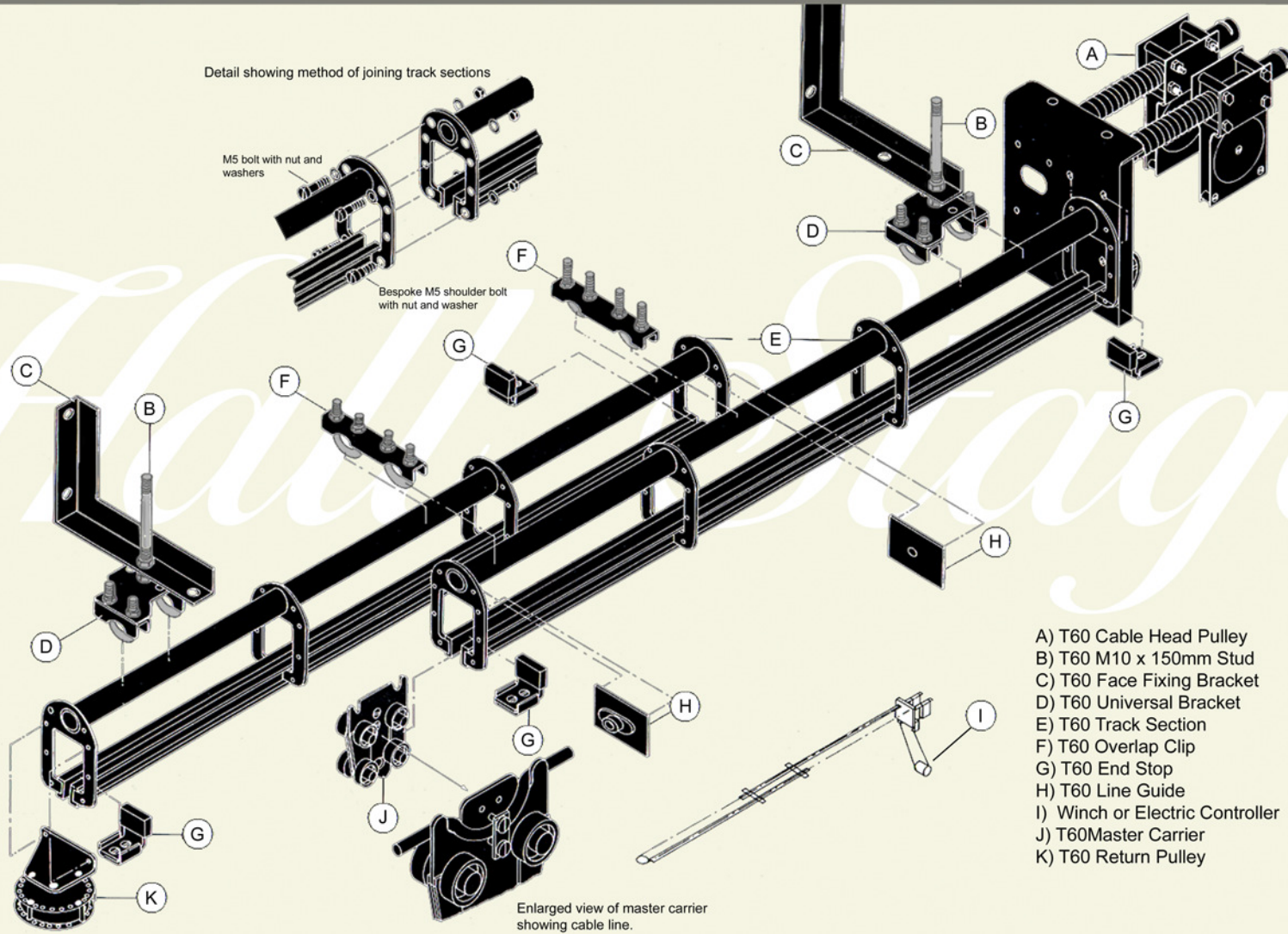
Material: Mild Steel

Weight per mtr: 2.25kg  
(approximate)

Finish: Powder Coat Black  
Colour: RAL9005







**Track Run**

Straight TrackRun = Length of Straight Section

Curve TrackRun =  $((\text{Radius} * 2) * \text{PI}) / 360) * \text{Angle}$

Overlap Track. Treat overlapped sections as one piece. So a 12mtr overlap track would have a run of 12mtr, rather than 2 x 6.5mtr. (The sections that make up either side).

Mixed Tracks. On tracks made up of straights and curves the run = the sum of all the straight and curve sections using the formulas above.

**Runners (per 10)**

Runners =  $((\text{Run} * 3.3) / 10)$  rounded up to the nearest whole number

**End Stops (per 2)**

Single Track	1
Overlap Track	2

**Joint Bolt Sets (per 4)**

Closed Loop Tracks Joints =  $(\text{Number of Track Sections} / 10)$  rounded up to the nearest whole number

Single Run Tracks Joints =  $((\text{Number of Track Sections} - 1) / 10)$  rounded up to the nearest whole number

Overlap Tracks Joints =  $((\text{Number of Track Sections} - 2) / 10)$  rounded up to the nearest whole number

**Fixings (per 2)**

Fixings =  $((\text{Run} - 2) / 1.5)$  rounded up to the nearest whole number) + 1

**Cable (per 10)**

Cable =  $((\text{Run} * 2) + (\text{Drop} * 2) + 3) + \text{Drum max Travel} + (\text{Length of any Diversions} * 2) / 10$  rounded up to the nearest whole number

**Cord (per 10)**

Cord =  $((\text{Run} * 2) + (\text{Drop} * 2) + 3) / 10$  rounded up to the nearest whole number



### T60 Ball Raced Wheeled Runner



Load applied at which runner showed signs of distortion  
75KG

Load at which runner was destroyed  
-----

250KG test ended - runner not destroyed but not in working condition.

Applied Load

### T60 Plain Wheeled Runner



Load applied at which runner showed signs of distortion  
75KG

Load at which runner was destroyed  
-----

250KG test ended - runner not destroyed but not in working condition.

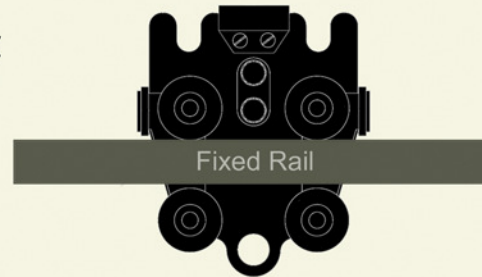
Applied Load

### T60 Ball Raced Master Carrier

Load applied at which carrier showed signs of distortion  
120KG

Load at which carrier was destroyed  
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250KG test ended - carrier in good working order.



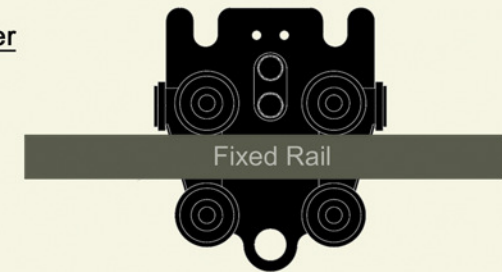
Applied Load

### T60 Plain Wheel Master Carrier

Load applied at which carrier showed signs of distortion  
165KG

Load at which carrier was destroyed  
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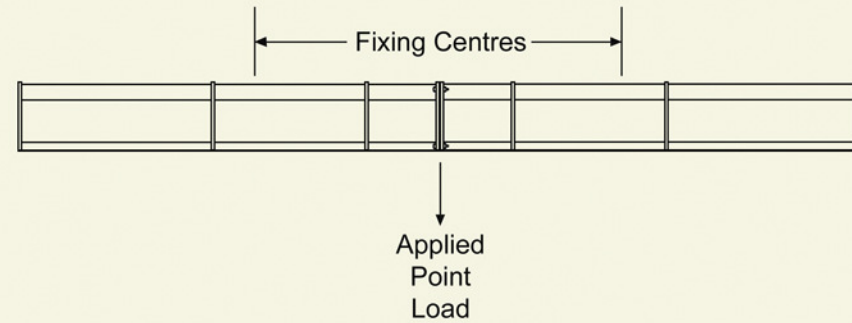
250KG test ended - carrier in good working order.



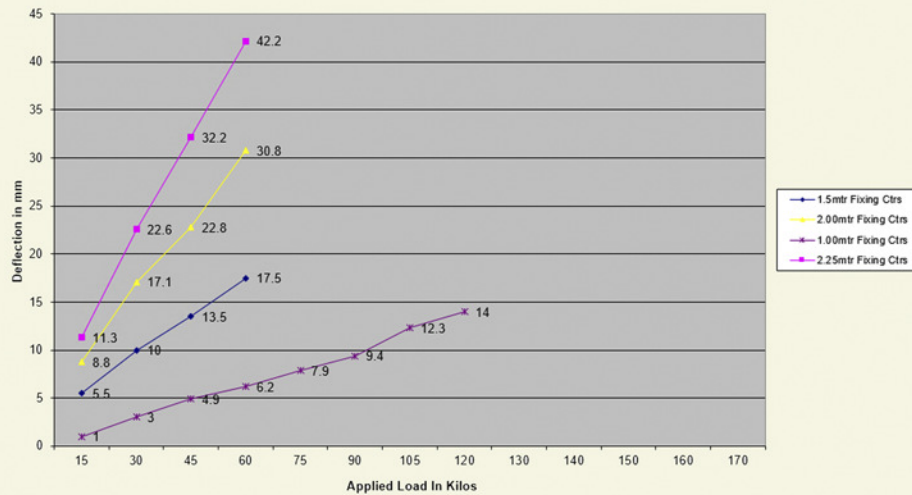
Applied Load



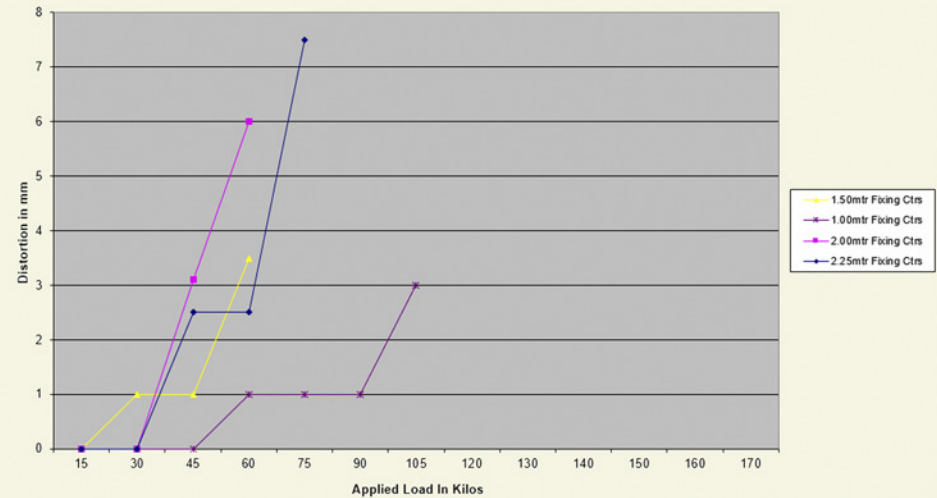
T60								
Applied Load Kg	1		1.5		2		2.25	
	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion
15	1	0	5.5	0	8.8	0	11.3	0
30	3	0	10	1	17.1	0	22.6	0
45	4.9	0	13.5	1	22.8	3.1	32.2	2.5
60	6.2	1	17.5	3.5	30.8	6	42.2	2.5
75	7.9	1						7.5
90	9.4	1						
105	12.3	3						
120	14							
130								
140								
150								
160								
170								



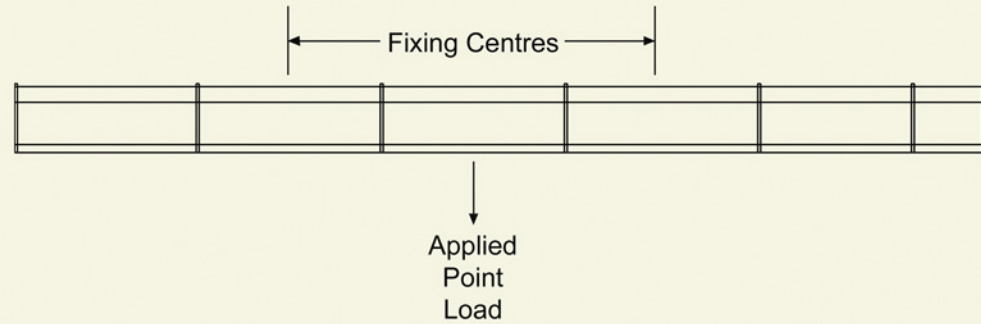
T60 Weight Test Across Joint - Measuring Deflection



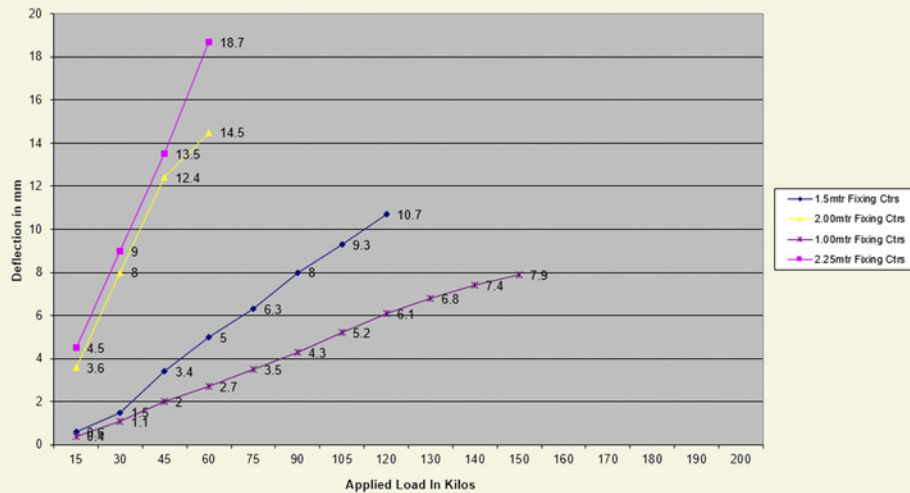
T60 Weight Test Across Joint - Measuring Distortion



T60								
Applied Load Kg	1		1.5		2		2.25	
	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion
15	0.4	0	0.6	0	3.6	0	4.5	0
30	1.1	0	1.5	0	8	0	9	0
45	2	0	3.4	0	12.4	0.7	13.5	1
60	2.7	0	5	0	14.5	1.3	18.7	1.5
75	3.5	0	6.3	0				
90	4.3	0	8	1				
105	5.2	0	9.3	1				
120	6.1	0.5	10.7	1.5				
130	6.8	0.5						
140	7.4	0.5						
150	7.9	0.8						
160								
170								
180								
190								
200								



T60 Weight Test Across Track - Measuring Deflection



T60 Weight Test Across Track - Measuring Distortion

