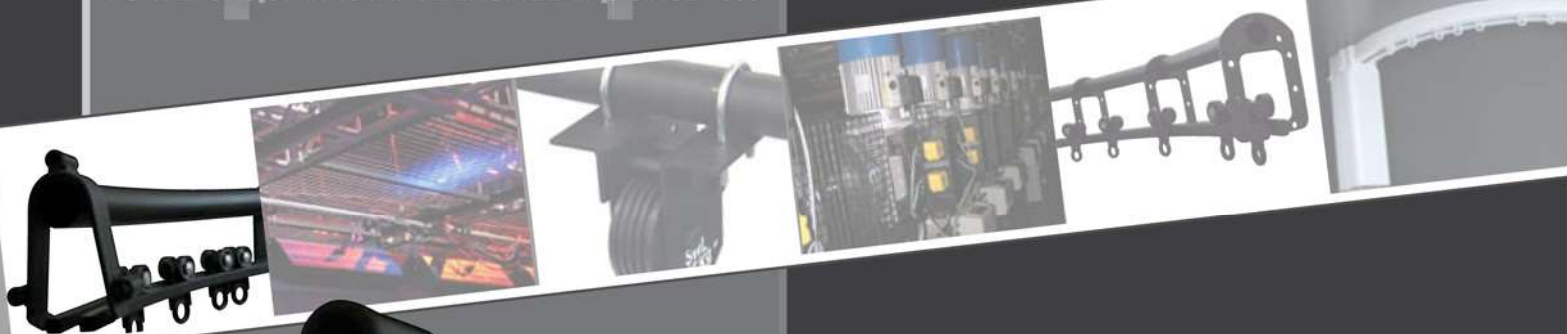


Hall Stage

PURVEYORS OF INNOVATIVE ENGINEERING SINCE 1898

T70 TRACK



HEAVY DUTY T70 TRACK

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www.hallstage.com

T70 Track is the heavy-duty system of choice for all long drape sets for stages and studios worldwide.

With a solid reputation for reliability and dependability, T70 provides high load capacity making it the ideal track for heavyweight curtains, cycloramas and installations with extreme spans.

For single or overlapped operation, straight and curved sections enable the construction of a vast variety of configurations - with fixing kits to suit any application.



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T70 TRACK

APPLICATION

Heavy duty track used in a wide range of applications including theatres, opera houses, proscenium tracks, cyclorama tracks, TV studios and schools. Tracks can also be used for hanging on counterweight sets and powered bars.

CAPACITY

- Wheeled runners 20kg capacity, one runner per 300mm* of curtain length recommended
- Optional ball raced runners 25kg capacity*
- Scenery carriers to 45kg capacity

TRACK FORMS/CONFIGURATIONS

- Vast range of configurations
- Straight Lengths 500mm - 3000mm
- Curved sections available from 1mtr radius

FINISH

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



T70 Drop Out

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

Full specifications of the T70 track range and other fine stage and theatre products may be obtained from our web site as downloadable product sheets.

For more information visit: www.hallstage.com or enquire via e-mail: 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 a 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 2mtrs 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 M12 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 and 60mm diameter.
- 'Z' Brackets to suspend overlapped tracks directly below and parallel to barrel with 38mm, 48mm and 60mm diameter.

ADVANCED FEATURES

The T70 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. T70 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.



The No. T-70 Curtain Track has, over the years, proved its reputation as one of the most versatile and dependable curtain tracks available to the entertainment industry.

The main areas in which it is used being the large theatre, touring theatre, television studio cyclorama, cinema curtain track, and in most situations where heavy curtains are to be carried.

Methods of working the T-70 Curtain Track are by electric controller, hand winch, handline or walk along method. When controllers for tracks over 22m overlapped and 11m single are required, these are manufactured to suit our customers individual requirements.

Manufacture of the T-70 Curtain Track is from heavy gauge steel, electrically welded. A range of track sections are available in both curved and straight sections, from which it is possible to construct any number of track configurations.

We recommend a maximum carrying capacity of 7 Kilo per carrier for the T-70 curtain track, these should be spaced at intervals of 300mm. T-70 Curtain Tracks are also available fitted with ball race wheel runners and leaders, which increases the load capacity of each runner to 9 Kilo.

A variety of suspension fittings are manufactured for use with the curtain track, most of them allowing for final height adjustment.



Typically, T70 is fixed at 100mm centres and suspended from M12 studding.

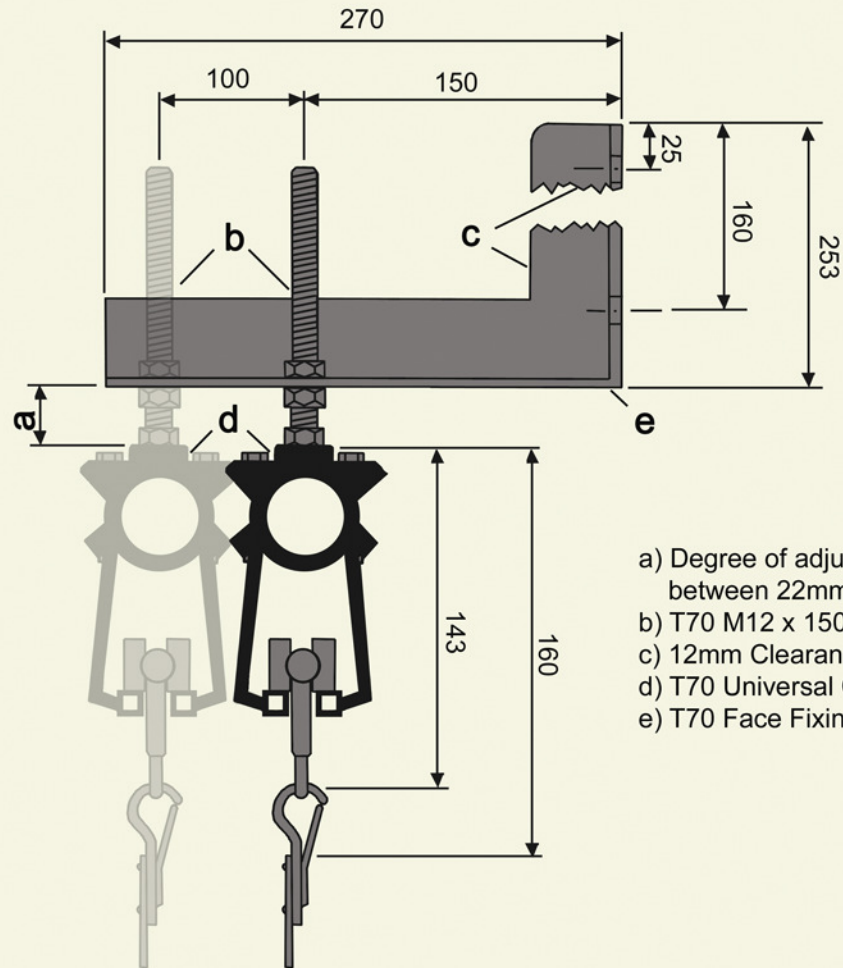
While the image shows the track suspended from a wall bracket, T70 can be suspended from girders, tube, timber, ceilings and deadlines as standard and bespoke fixings can be manufactured for site specific situations.

150mm studding is suitable for most fixing solutions and will allow for around 70mm of adjustment.

For tube fixing 300mm stud is required to attain the same level of adjustment.

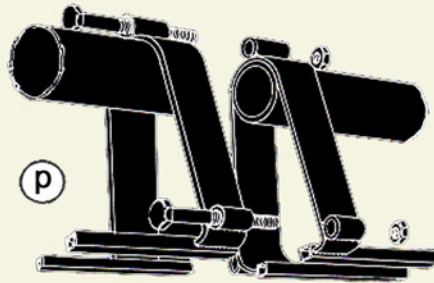
Studding can be supplied cut to non-standard lengths upon request.

Studding is connected to the curtain track with use of the T70 Universal fitting.

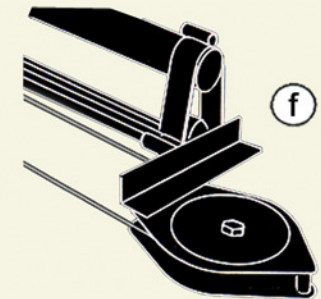
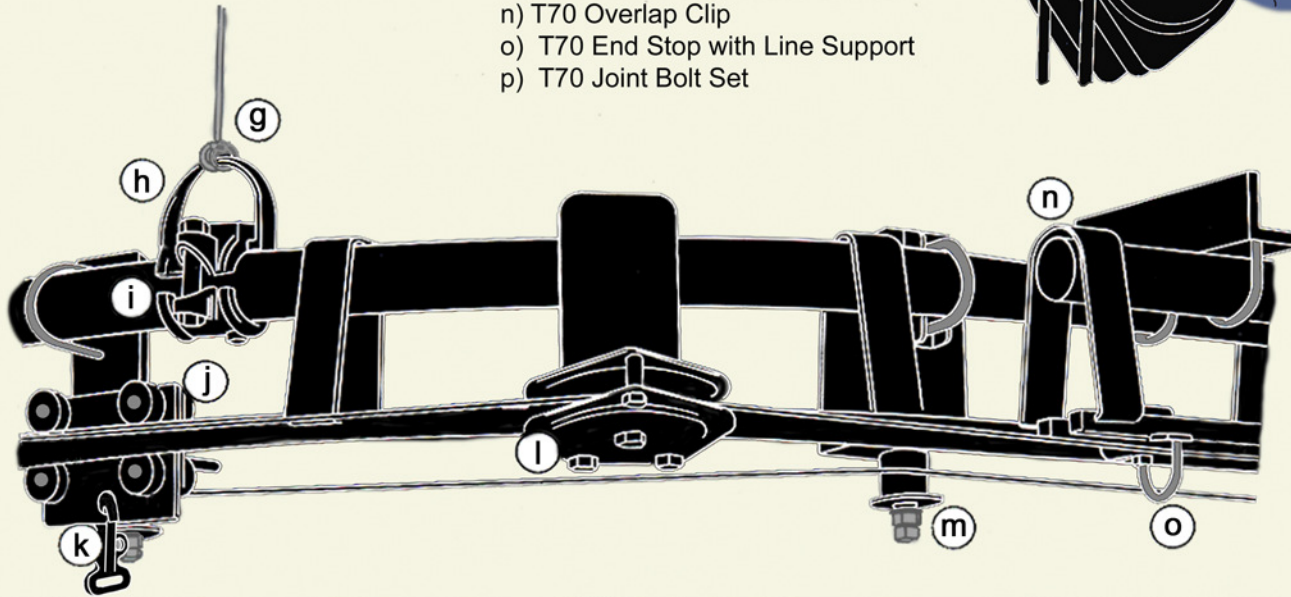
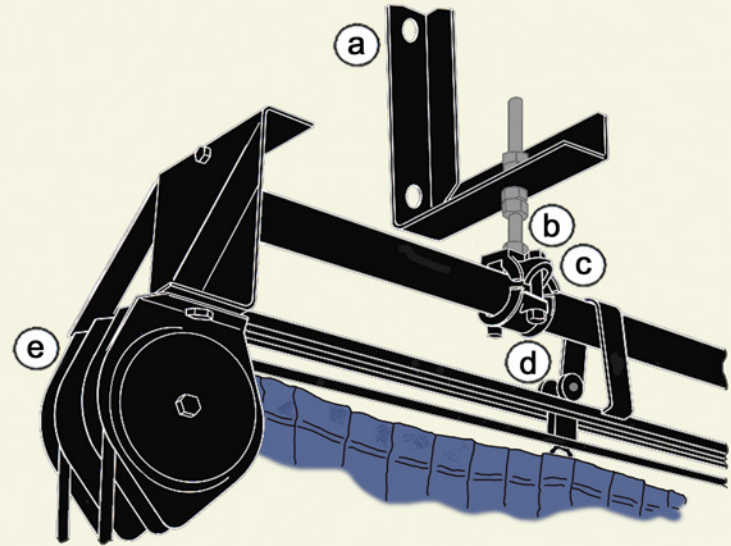


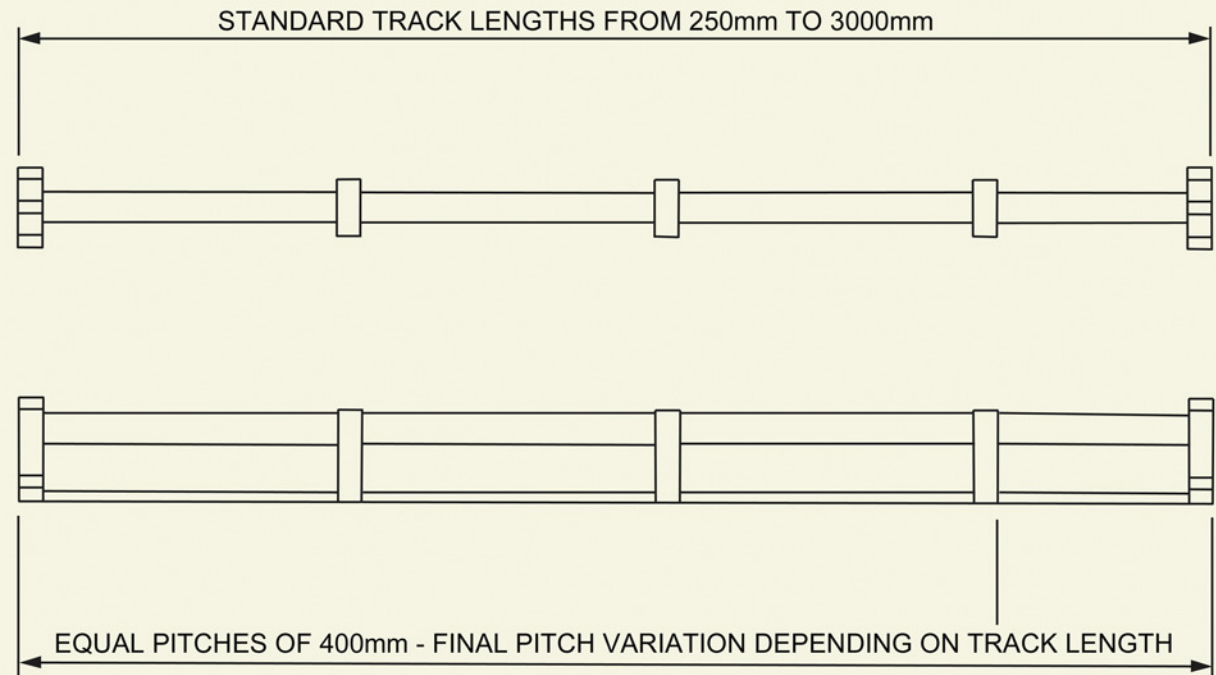
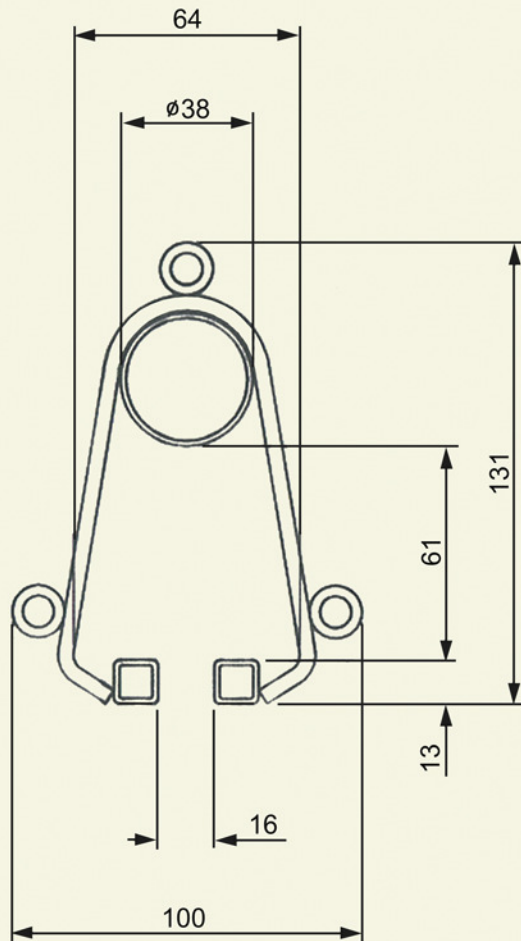
- a) Degree of adjustmet between 22mm - 92mm
- b) T70 M12 x 150mm Stud Bolt
- c) 12mm Clearance Holes
- d) T70 Universal Clamp
- e) T70 Face Fixing Bracket





- a) T70 Face Fixing Bracket
- b) T70 M12 x 150mm Stud Bolt
- c) T70 Universal Clamp
- d) T70 Wheeled Runner
- e) T70 Hand Line Head Pulley
- f) T70 Return Pulley
- g) Cable Grip
- h) T70 "D" Ring
- i) T70 Universal Clamp
- j) T70 Master Carrier
- k) Tab Hook
- l) T70 Curve Guide Pulley
- m) T70 Curve Single Take Off Roller
- n) T70 Overlap Clip
- o) T70 End Stop with Line Support
- p) T70 Joint Bolt Set





All dimensions in mm

Material: Mild Steel

Weight per mtr: 3.6kg
(approximate)

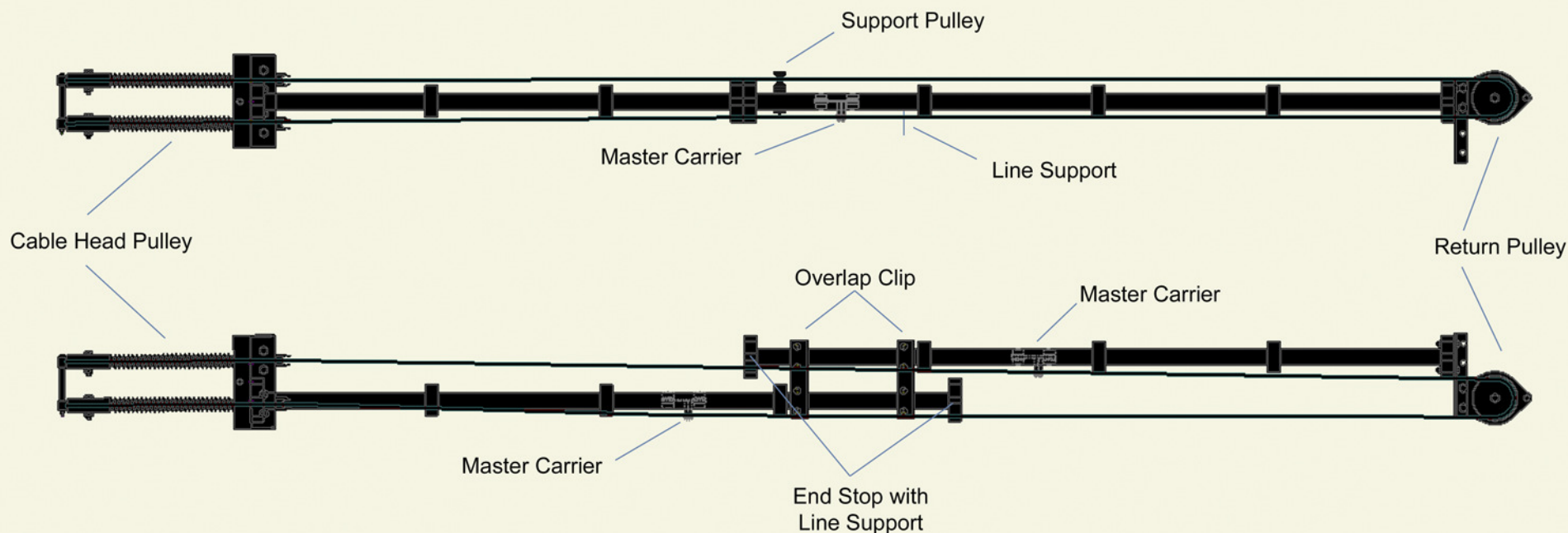
Finish: Powder Coat Black
Colour: RAL9005



T70 curtain tracking is cored below the track. For this reason tracks are cored slightly differently depending on whether they are single or overlapped, straight or curved. Below is a typical cording solution for a single straight track (top) and a straight overlapped track (bottom).

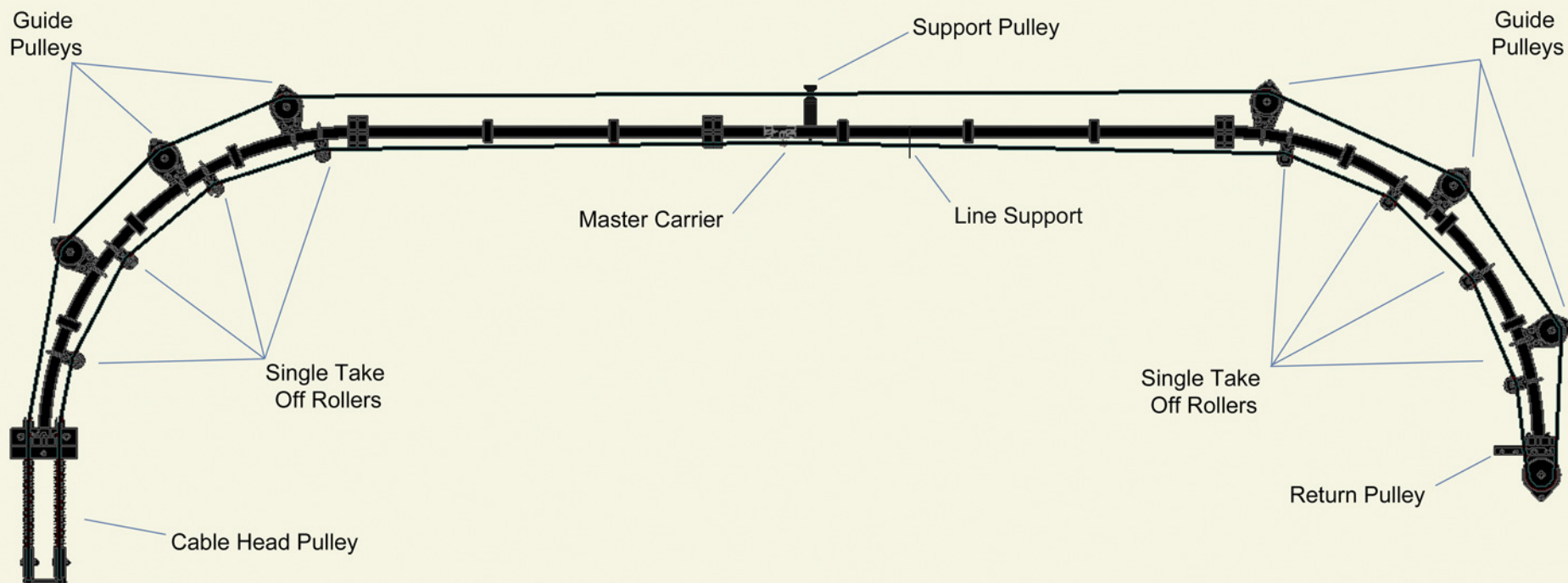
Note that on a single track, the cable head and return pulley are both mounted centrally on the track, whereas on the overlap the cable head and return pulley are offset opposite to each other to align both with the track they are fixed to and with the track that they are not.

The master carrier can be mounted with the pins facing either way on a single track, however on an overlapped track they should be orientated as shown with pins both facing in the same direction. End stops with line support are required on overlap tracks and line supports and support pulleys are used on either style of track, to reduce cable droop, where an unsupported straight length of 8mtr or more exists.



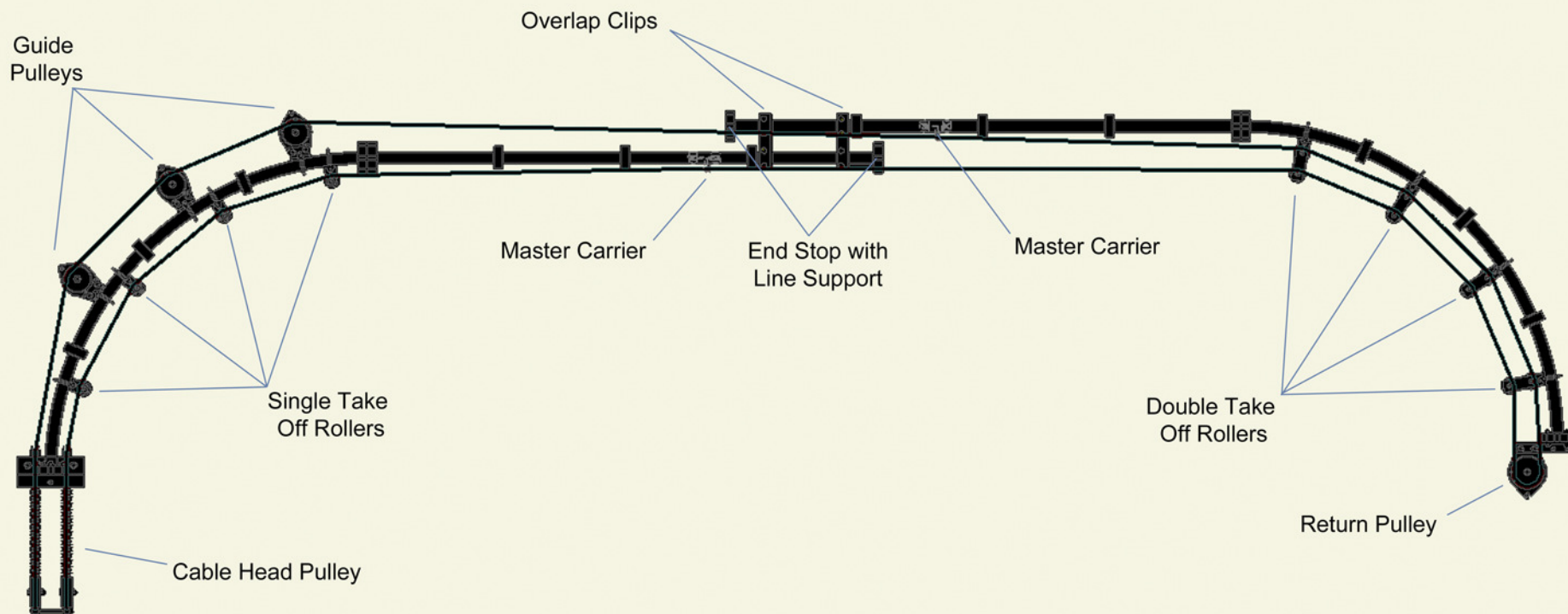
T70 curtain tracking is corded below the track. For this reason tracks are corded slightly differently depending on whether they are single or overlapped, straight or curved. Below is a typical cording solution for a single curved track.

Note that, unlike on a curved overlap track, the cable head and the return pulley are both mounted centrally on the track and there are no double take off rollers. The master carriers is still orientated with the pins facing inwards to take the cord "off" the single rollers as they pass. End stops with line support are no longer required. Instead line supports and support pulleys are used on straight lengths of 8mtr or more reduce cable sagging.



T70 curtain tracking is corded below the track. For this reason tracks are corded slightly differently depending on whether they are single or overlapped, straight or curved. Below is a typical cording solution for an overlapped curved track.

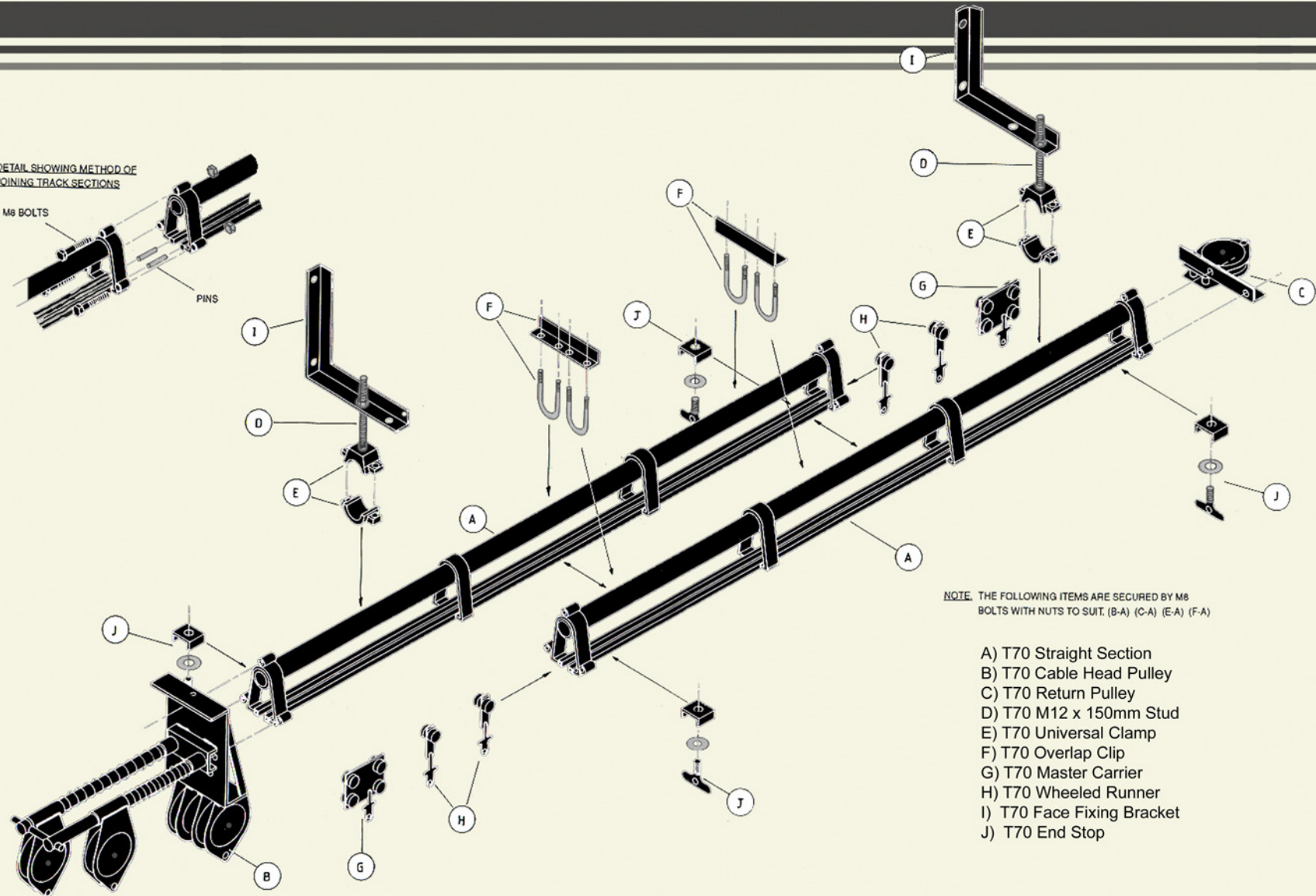
Note that the cable head is mounted centrally on the track while the return pulley is mounted offset and to the inside of the track so that it aligns with the double take off rollers. The master carriers are orientated with the pins facing inwards and take the cord "off" the rollers as they pass. End stops with line support are fitted at the overlap to help reduce cable sagging.



DETAIL SHOWING METHOD OF JOINING TRACK SECTIONS

M8 BOLTS

PINS



NOTE: THE FOLLOWING ITEMS ARE SECURED BY M8 BOLTS WITH NUTS TO SUIT. (B-A) (C-A) (E-A) (F-A)

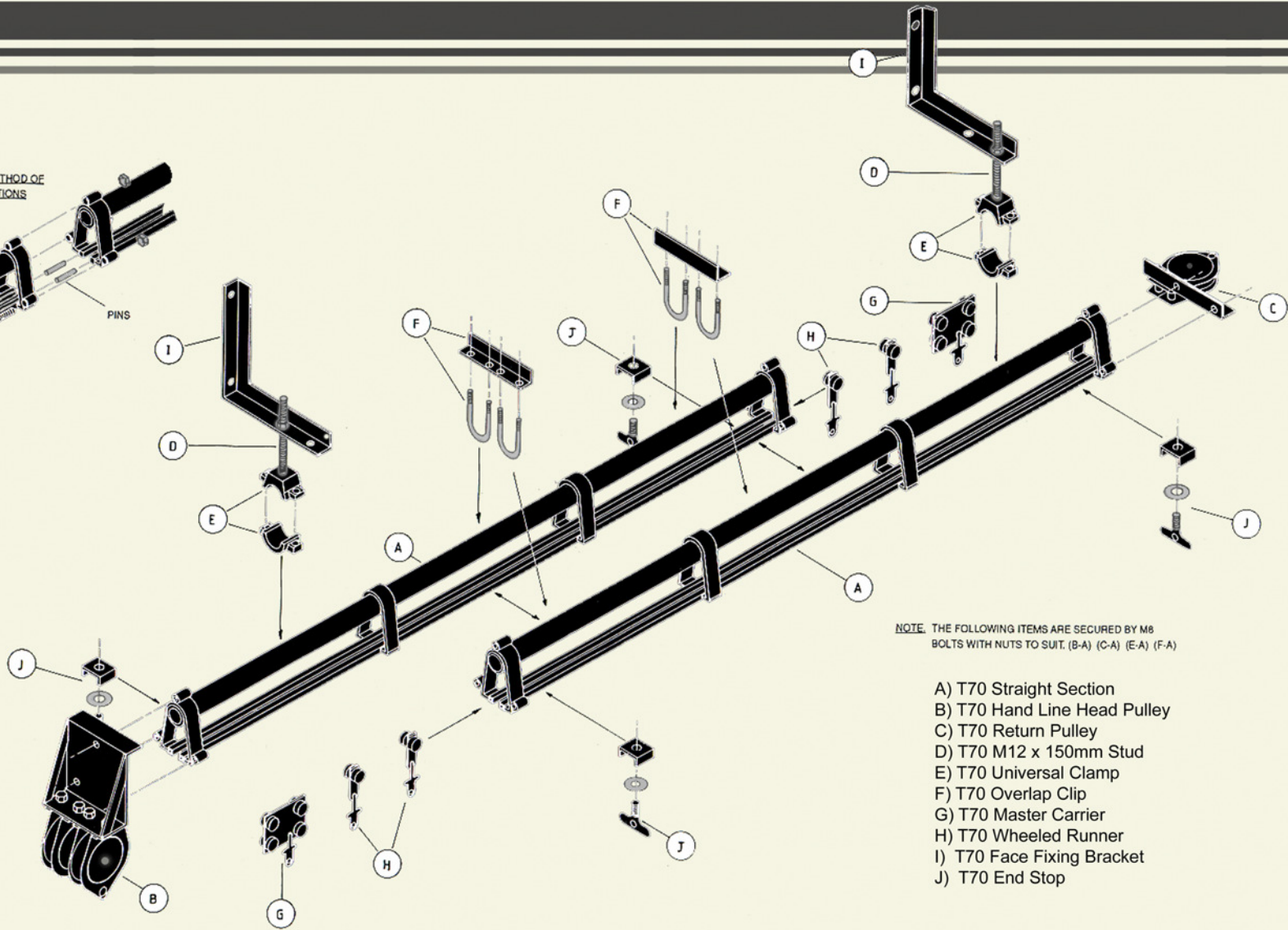
- A) T70 Straight Section
- B) T70 Cable Head Pulley
- C) T70 Return Pulley
- D) T70 M12 x 150mm Stud
- E) T70 Universal Clamp
- F) T70 Overlap Clip
- G) T70 Master Carrier
- H) T70 Wheeled Runner
- I) T70 Face Fixing Bracket
- J) T70 End Stop



DETAIL SHOWING METHOD OF JOINING TRACK SECTIONS

M8 BOLTS

PINS



NOTE: THE FOLLOWING ITEMS ARE SECURED BY M8 BOLTS WITH NUTS TO SUIT, (B-A) (C-A) (E-A) (F-A)

- A) T70 Straight Section
- B) T70 Hand Line Head Pulley
- C) T70 Return Pulley
- D) T70 M12 x 150mm Stud
- E) T70 Universal Clamp
- F) T70 Overlap Clip
- G) T70 Master Carrier
- H) T70 Wheeled Runner
- I) T70 Face Fixing Bracket
- J) T70 End Stop



Track Run

Straight TrackRun = Length of Straight Section

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

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

End Stops (per 2)	End Stop	End Stop with Line Guide
Single Track	1	0
Overlap Track	1	1

Joint Bolt Sets (per 4)

Closed Loop Tracks Joints = $\frac{(\text{Number of Track Sections})}{4}$ rounded up to the nearest whole number

Single Run Tracks Joints = $\frac{((\text{Number of Track Sections} - 1))}{4}$ rounded up to the nearest whole number

Overlap Tracks Joints = $\frac{((\text{Number of Track Sections} - 2))}{4}$ rounded up to the nearest whole number

Fixings (per 2)

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

Cable (per 10)

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

Cord (per 10)

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



T70 Ball Raced Wheeled Runner



Load applied at which runner showed signs of distortion
90KG

Load at which runner was destroyed
250KG

250KG test ended - wheel collapse.

Applied Load

T70 Plain Wheeled Runner



Load applied at which runner showed signs of distortion
90KG

Load at which runner was destroyed

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

Applied Load

T70 Ball Raced Master Carrier

Load applied at which carrier showed signs of distortion
150KG

Load at which carrier was destroyed

250KG test ended - carrier in good working order.



Applied Load

T70 Plain Wheel Master Carrier

Load applied at which carrier showed signs of distortion
150KG

Load at which carrier was destroyed

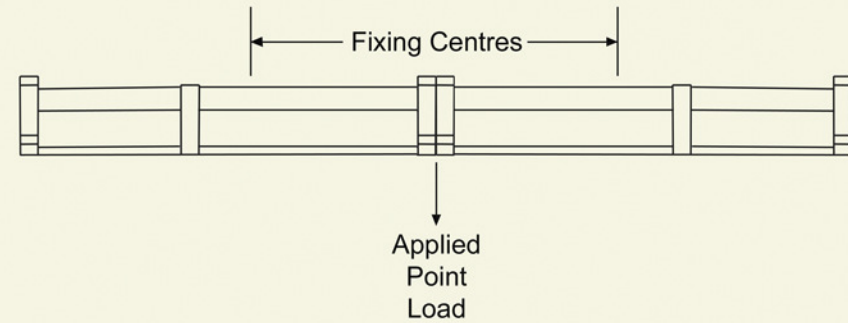
250KG test ended - carrier in good working order.



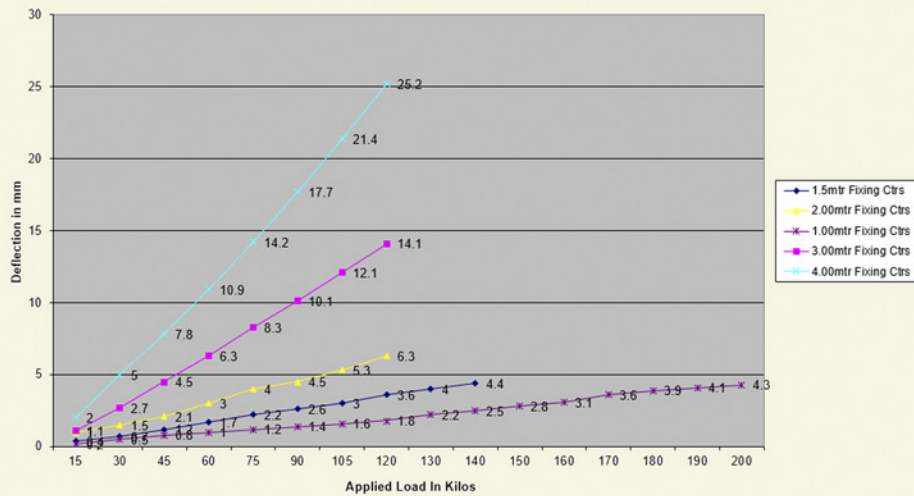
Applied Load



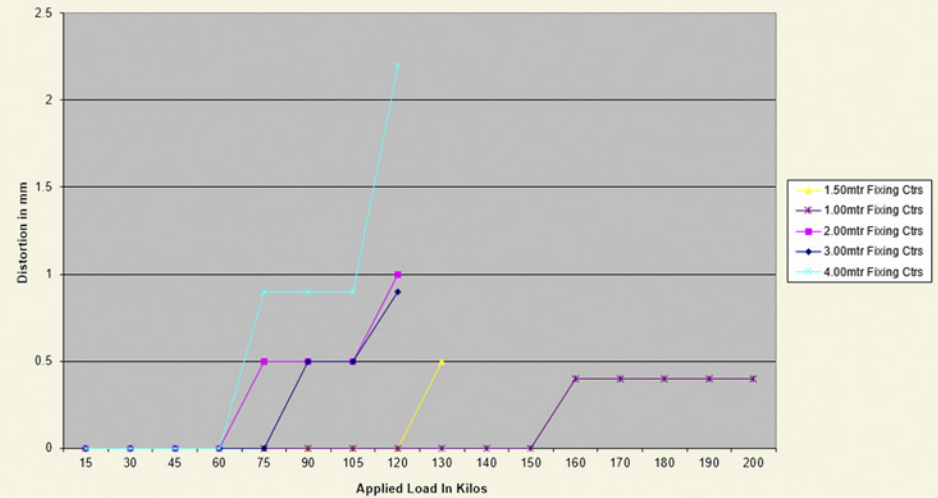
T70											
Applied Load Kg	1		1.5		2		3		4		
	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion	
15	0.2	0	0.4	0	1	0	1.1	0	2	0	
30	0.5	0	0.7	0	1.5	0	2.7	0	5	0	
45	0.8	0	1.2	0	2.1	0	4.5	0	7.8	0	
60	1	0	1.7	0	3	0	6.3	0	10.9	0	
75	1.2	0	2.2	0	4	0.5	8.3	0	14.2	0.9	
90	1.4	0	2.6	0	4.5	0.5	10.1	0.5	17.7	0.9	
105	1.6	0	3	0	5.3	0.5	12.1	0.5	21.4	0.9	
120	1.8	0	3.6	0	6.3	1	14.1	0.9	25.2	2.2	
135	2.2	0	4	0.5							
150	2.5	0	4.4								
165	2.8	0									
180	3.1	0.4									
195	3.6	0.4									
210	3.9	0.4									
225	4.1	0.4									
240	4.3	0.4									



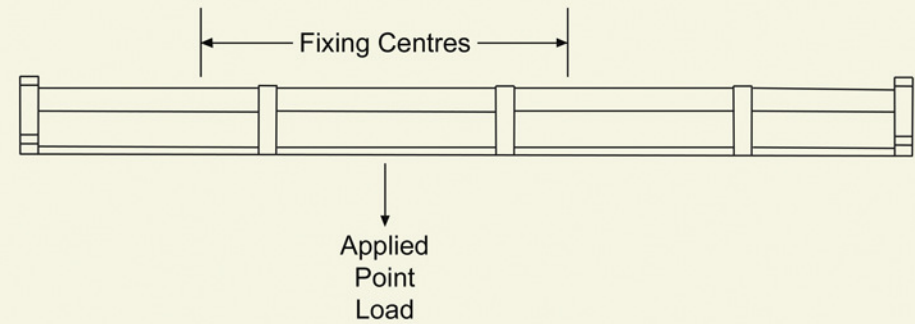
T70 Weight Test Across Joint - Measuring Deflection



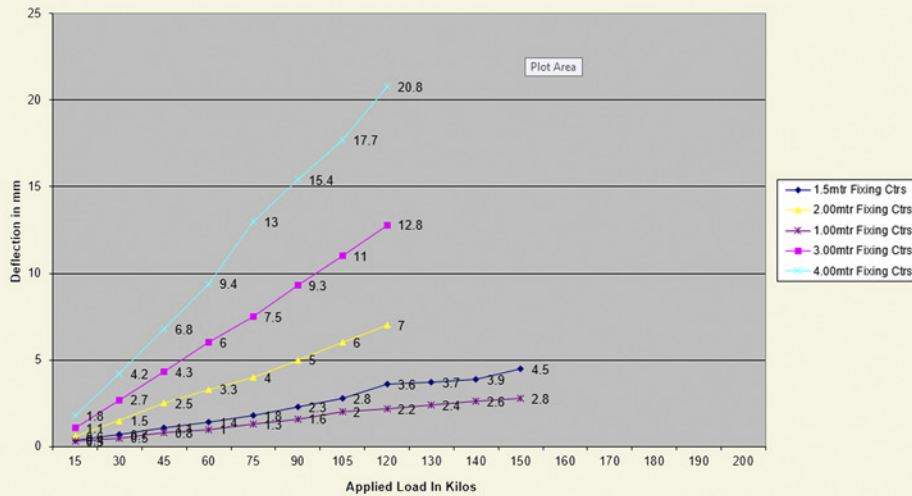
T70 Weight Test Across Joint - Measuring Distortion



T70											
Applied Load Kg	1		1.5		2		3		4		
	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion	Deflection	Distortion	
15	0.3	0	0.4	0	0.6	0	1.1	0	1.8	0	
30	0.5	0	0.7	0	1.5	0	2.7	0	4.2	0	
45	0.8	0	1.1	0	2.5	0	4.3	0	6.8	0	
60	1	0	1.4	0	3.3	0	6	0	9.4	0.5	
75	1.3	0	1.8	0	4	0	7.5	0	13	0.5	
90	1.6	0	2.3	0	5	0.5	9.3	0.5	15.4	0.5	
105	2	0	2.8	0	6		11	0.5	17.7	0.5	
120	2.2	0.4	3.6	0.4	7		12.8	0.9	20.8	2	
135	2.4	0.4	3.7	0.4							
140	2.6	0.4	3.9	0.4							
150	2.8	0.7	4.5	0.7							
160											
170											
180											
190											
200											



T70 Weight Test Across Track - Measuring Deflection



T70 Weight Test Across Track - Measuring Distortion

