



## UNITRACK SPECIFICATION

The UNITRACK system is central to the Triple E product range and is universally recognised as the market leader for stage tracks. It is robust, versatile, and very reliable fulfilling many roles and purposes backstage and in many other areas where a track system is the requirement.

The UNITRACK track form is a fabricated steel 'I' beam creating very solid running surfaces for the wheeled runners and a mounting platform for the cord pulleys plus a comprehensive range of track fittings to meet all requirements. The standard finish for all components is matt black

UNITRACK has two pairs of  $\frac{3}{4}$ " square steel tube spaced apart to create  $\frac{1}{2}$ " horizontal slots top and bottom of the track. The top and bottom pairs of tube are welded together by rectangular steel tubes at nominal 20" pitches. A range of track section lengths in both straights and curves are available to achieve any length or configuration required and are easily joined together by four square spigots and just one joint bolt, nut and washer.

UNITRACK runners and pulleys all have sealed greased ball-raced bearings which are insert moulded into nylon outers to ensure silent operation.

All forms of track configurations can be created by to using UNITRACK, from single and overlapped straight systems to curved and reverse curved layouts. These can be motorised, walk-along or corded as required, and even double corded.

UNITRACK uses a pre-stretched matt black polyester cord for all its cording systems, including curved tracks. Operation of any UNITRACK layout is more easily achieved with a cord and a manual or electric TRAC-DRIVE winch; Or a simple tensioned floor pulley can be used where appropriate.

### Principal FEATURES:

- TRACK:** The unique fabricated I beam, with one 8mm bolt and nut, and 4 jointing spigots ensures easy assembly and a smooth running surface every time. Its symmetrical shape allows it to be used either way up. Vertical supports between the running surfaces means it never jams.
- RUNNER:** Nylon wheels encase precision bearings ensuring smooth operation, while rubber buffers provide silent stacking. Runners can be removed or added at any point along the track whether corded or not. A comprehensive range of master runners and scenery carriers is also available. The rearfold accessory may be added to enable curtains to stack offstage rather than from centre.
- SUSPENSION:** The versatile slot design enables positioning of hanging points anywhere along its length, and a variety of hanging methods can be employed, including eye bolts for steel rope, studding, girder clamps or purpose made brackets. Pictured is our hook clamp which will fit tubes from 38 to 52mm and will not cause damage when fully tightened.
- PULLEYS:** For corded systems, head and return pulleys with nylon sheaves provide smooth, silent operation. The floor pulley is available as an adjustable floor mounted version, or as pictured with a foot stirrup. A number of pulley types are available to achieve multiple curtain and scenery travelling effects.



## Unitrack Parts and Descriptions

### Track sections

<b>TRA 01</b>	<b>250mm</b> Straight track section
<b>TRA 02</b>	<b>500mm</b> Straight track section
<b>TRA 03</b>	<b>1 metre</b> Straight track section
<b>TRA 04</b>	<b>2 metre</b> Straight track section
<b>TRA 05</b>	<b>Joint set</b> ( 4 spigots, 1 joint bolt with nut and 2 washers )

### Runners

**TRA 06**      **2 wheeled runner**, for straight track. The runner may be added or removed at any point along the track whether or not the system is corded, by removing the keeper bar. For standard curtains the runners should be spaced 300mm apart. Each runner has a SWL of 25Kg.

**TRA 06c**      **4 wheeled runner**, for curved track. The four wheels ensure that the runner cannot stick or jam. Each runner has a SWL of 25Kg.

**TRA 06r**      **Rearfold runner**, as TRA 06 but with rearfold accessory fitted. These will cause the curtain to stack at the rear or offstage end of the curtain instead of the centre. It is of particular use on painted cloths where the image is not lost as the curtain folds. Each runner has a SWL of 25Kg.

**TRA 07**      **Master runner**, used for the leading edge of curtains and to clamp the cord on corded systems. The spacing between the two curtain loops on the master runner is 55mm. Each runner has a SWL of 50Kg.

**TRA 07s**      **Master runner with adjustable rope clamp**, for use on single tracks when used with part number TRA 31. Each runner has a SWL of 50Kg.

**TRA 07a**      **Overlap arm**, may be added to master runners on single tracks to create an overlap.

**TRA 08 Rearfold accessory**, may be retro-fitted to TRA 06 to make TRA 06r, or to TRA 06c if used on straight track sections.

### Scenery Carriers

**TRA 28**      **Scenery carrier**, used to carry items of varying thickness from 6mm to 60mm. It pivots in all directions allowing the flattage to be attached to the carrier at working height, pivoting as the track is flown. Each carrier has a SWL of 50Kg.

**TRA 28hd**      **Heavy Duty Scenery Carrier**.  
Capable of carrying a much heavier load than the standard Scenery Carrier, with a SWL of 100Kg.

**TRA 28a**      **Scenery carrier ( top only )**. Used where odd items of scenery are to be suspended, the centre hole in the carrier can accommodate 12mm studding or bolts. Each carrier has a SWL of 50Kg.

**TRA 28b**      **Scenery Carrier (bottom only)**  
Can be retro-fitted to TRA28a / 28hd for full scenery carrying capability.



### Pulleys

**TRA 09 Head pulley**, used on straight track system to divert the cord down to the floor. The rearfold system uses this pulley.

**TRA 10 Return pulley**, Used at the opposite end of straight track systems from the TRA 09.

**TRA 11 Foot stirrup**, used on flown or movable track systems. It can be tensioned by placing a foot into the stirrup and pressing it to the floor. Alternatively holes are provided in the base so that it can be screwed to the floor.

**TRA 12 Adjustable floor pulley**, this can be weighted or screwed to the floor and the pulley may be altered in height and clamped to adjust the tension of the operating cord.

**TRA 31 Single track pulley set**. A set of head and return pulleys used on a single track. They can be purchased separately as TRA 31h and TRA 31r. When used in conjunction with TRA 07s and TRA 07a, a centre overlap can be achieved. When used with scenery carriers, the scenery will butt together in the centre.

### Suspension Fittings

**TRA 13 Girder clamp**, used to suspend the track from I beams. They will adjust to fit any size of beam, and are used with studding TRA18. SWL Data available on application.

**TRA 14 38 - 52mm hook clamp**, used for attaching the track to any size tube, truss etc. between 48 and 62mm diameter. Tested to 70Kg SWL.

**TRA 15 Deadline fixings**, used for suspending tracks from rope or wire rope. Tested to 150Kg safe working load.

**TRA 16 Wall bracket set**, used to attach the track to a wall or vertical surface, used with studding TRA 18. Tested to 100Kg safe working load at 200mm reach.

**TRA 17 Offset plate**, used with hook clamps TRA 14N, when an overlap track is suspended from a single pipe or tube. They ensure the track hangs centrally to the tube.

**TRA 18 Studding set**, a 150mm length of M12 studding supplied with four nuts and washers. Studding can be supplied in longer lengths if required.

### Accessories

**TRA 24 Endstop**, used for the ends of all tracks to anchor the trailing edge of the curtains.

**TRA 24s Flat endstop**, for use on scenery tracks, where there is no curtain to anchor.

**TRA 25 Line pickup**, used on straight tracks on the return side of the operating cord to prevent slack line from drooping into vision. Suggested fitting at 2.5m centres.

**TRA 26 Overlap clip set**, used on straight and curved track to maintain 80mm centres and keep the tracks rigid where they overlap.

**TRA 27 Cord / Handline**, 8 plait, 8mm diameter pre stretched matt black polyester cord used to operate the track systems.



## Curved track sections

<b>TRC 10 / 90</b>	<b>Standard</b> curved track section, 1 metre radius, 90 degrees
<b>TRC 15/90</b>	<b>Standard</b> curved track section, 1.5 metre radius, 90 degrees
<b>TRC 20 / 90</b>	<b>Standard</b> curved track section, 2 metre radius 90 degrees
<b>TRC 30 / 90</b>	<b>Standard</b> curved track section, 3 metre radius 90 degrees

Curved track sections also require joint set TRA05  
Other radii or lengths are available, made to order.

## Curved track fittings

**TRA 19** **Curve cord guide**, bolts to the top of the track and guides the operating cord around the top of the track system. They should be positioned 500mm apart on the curves and at 2m centres on the straight track

**TRA 20** **Curve master runner**, the arm attaches to the operating cord above the track and is guided through the curve cord guides (TRA 19). SWL 50kg

**TRA20hd** **Heavy Duty curve master runner**. As TRA20, but for use on longer tracks.

**TRA 21** **Curve head pulley**. Can be used to divert the operating cord either upwards to a motor, or down to the floor pulley( TRA 11 or TRA 12 ).

**TRA 22** **Curve return pulley**, Diverts the operating cord above the track back towards the head pulley ( TRA 21 ).

**TRA 23** **Curve suspension bracket..** It is used with other suspensions ( TRA 13, 14, 15, 16 & 18 ). The top holes work as an offset plate on curve tracks that overlap and are suspended from a single tube or pipe. **Unitrack parts and descriptions**



## Side cord system for straight tracks

The side cord system is designed to solve the problem of cord sag between the master runner and end pulleys on single straight tracks over 14m long. The system can be used with both scenery and curtains.

Normally on a track of 14m or longer the cord tends to sag between the master runner and the end pulleys and is therefore difficult to tension properly causing operational problems and sagging cord that can drop into vision. The side cord guides support the cord along the entire length of travel while the flippers only open in order to allow the master runner to pass through thus ensuring the cord cannot drop out of the guides and foul.

With this cording arrangement it is possible to have two separately corded systems, one on either side of the track. This allows two curtains or pieces of scenery to be controlled independently of each other.

This system allows many interesting effects to be achieved. For example two pieces of scenery can be made to meet anywhere along the track allowing variable masking and entrances. A single curtain between two master runners can be opened, closed, travelled bunched or stacked anywhere along the track.

Many examples of the layouts possible with this system are shown in the cording diagram section.

## Side cord fittings

**TRA 32 Side cord guide.** These are used at 2 to 4 metre centres to support the cord and prevent sag over longer distances. The flipper stops the cord from falling out of the guide whilst allowing the master or scenery carrier to pass through.

**TRA 33 Side cord centre overlap diverter.** This is used when curtains or scenery need to meet in the centre of the track.

**TRA 34 Side cord head and return pulley set ( three parts ).** Together these divert the cord to and from the floor pulley or motor.

**TRA 35 Side cord rope clamp.** This bolts into an existing hole on the side of a master runner or scenery carrier and is used to secure it to the cord.



## TESTING

Messrs. Sandberg, Consulting, Inspecting and Testing Engineers, of 40 Grosvenor Gardens, London SW1W 0LB, have carried out tests on UNITRACK components. (Report Nos. M/4390 and 10257/M). Copies of the test reports, certification and photographs of the testing may be inspected at our premises at any reasonable time. The test results have enabled Triple E Limited to provide its customers with the safe working recommendations set out below:

### UNITRACK suspended at 1m centres:

has a maximum point loading (midspan) of  
and a maximum uniformly distributed load capacity (UDL) of

200 Kgf.(PL)  
400 Kgf.(UDL)

### UNITRACK suspended at 2m centres:

has a maximum point loading (midspan) of  
and a maximum uniformly distributed load capacity (UDL) of

100 Kgf.(PL)  
200 Kgf.(UDL)

### UNITRACK suspended at 3m centres:

has a maximum point loading (midspan) of  
and a maximum uniformly distributed load capacity (UDL) of

50 Kgf.(PL)  
100 Kgf.(UDL)

### Safe working loads (SWL) for suspension fittings:

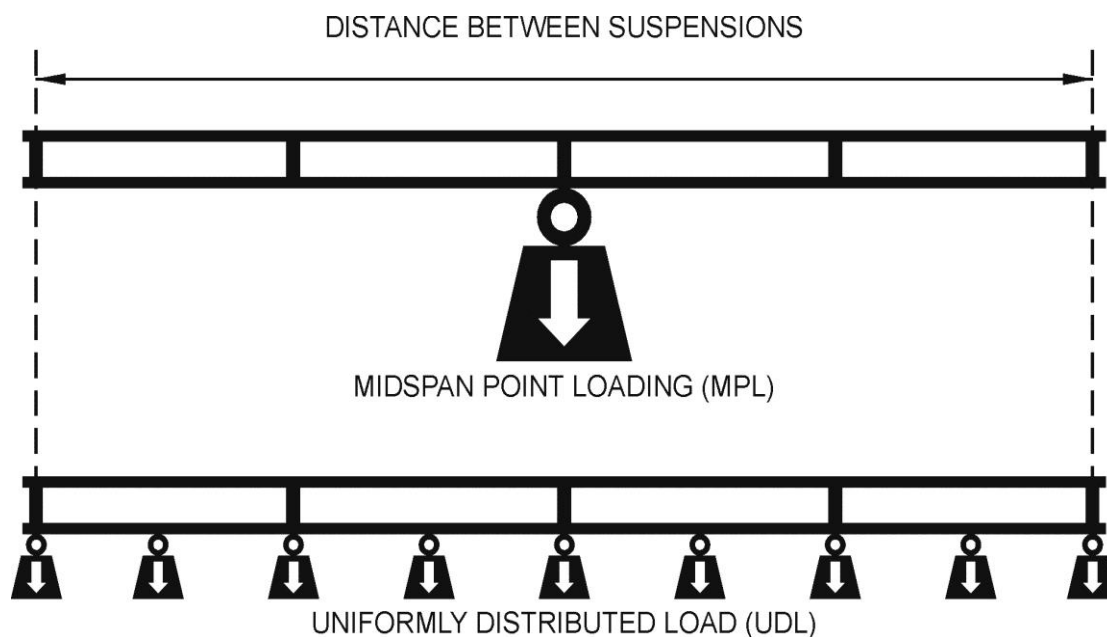
TRA 14N Hook Clamp  
TRA 15 Deadline fixing  
TRA 16 Wall Bracket set (at 200mm reach)

70 Kgf.(SWL)  
150 Kgf.(SWL)  
100 Kgf.(SWL)

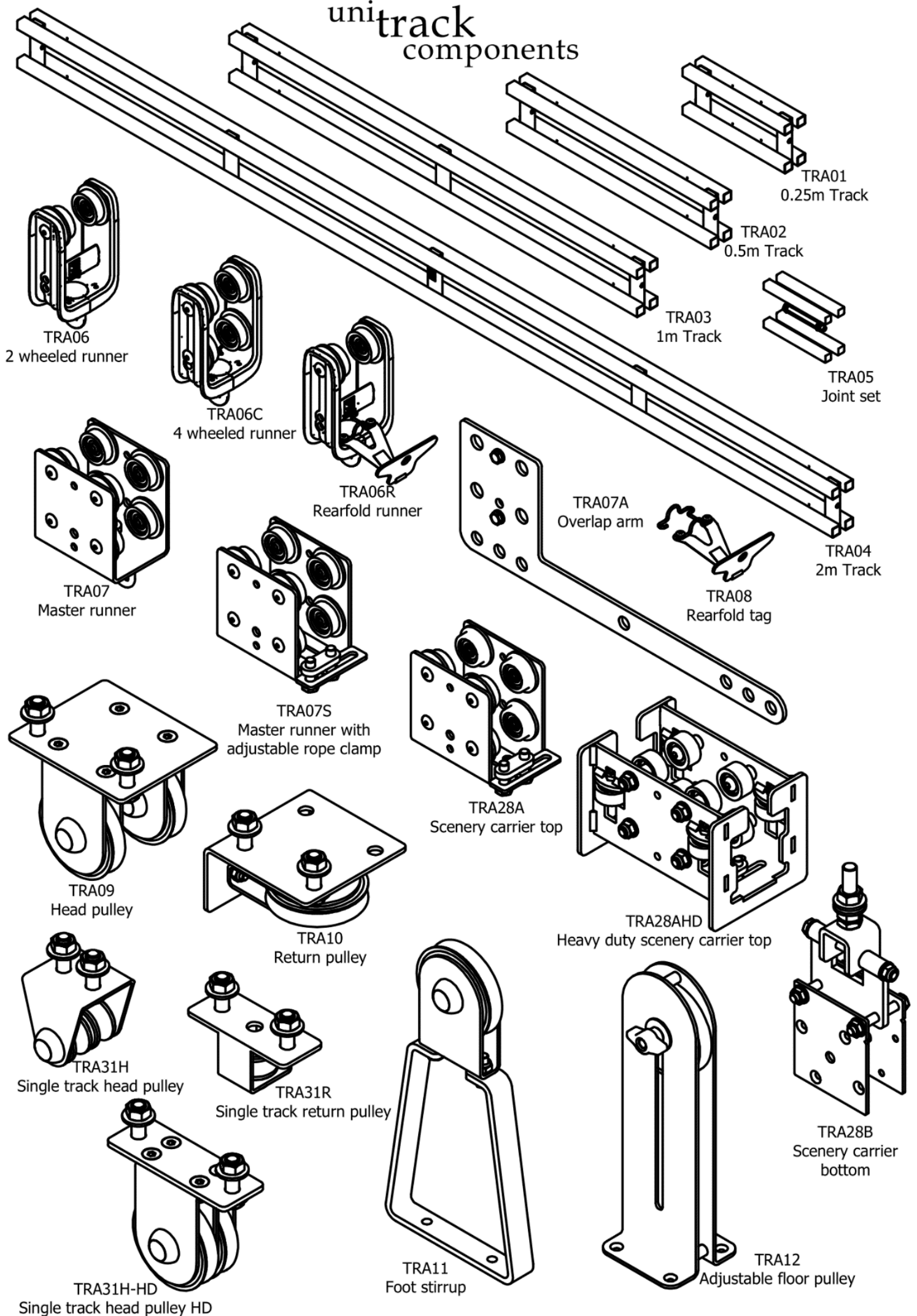
### Safe working loads (SWL) for runners:

TRA 06 2-wheeled runner  
TRA 06c 4-wheeled runner  
TRA 28 Scenery carrier (complete)  
TRA 28a Scenery carrier (top only)

25 Kgf.(SWL)  
25 Kgf.(SWL)  
50 Kgf.(SWL)  
50 Kgf.(SWL)

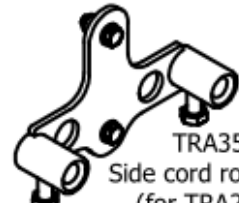
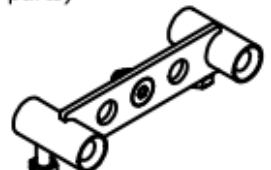
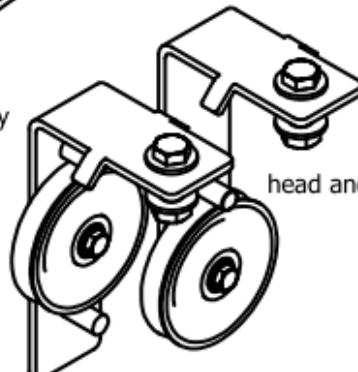
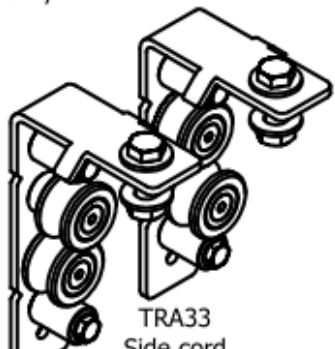
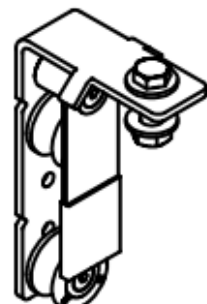
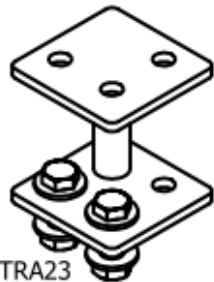
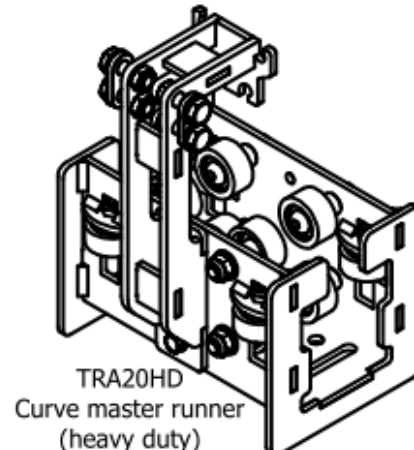
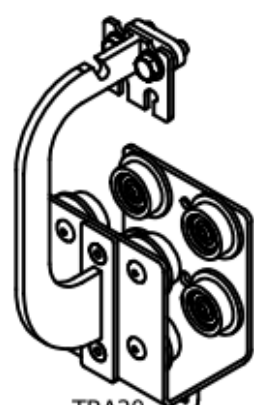
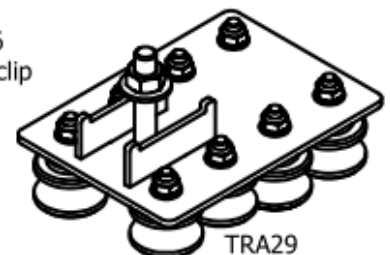
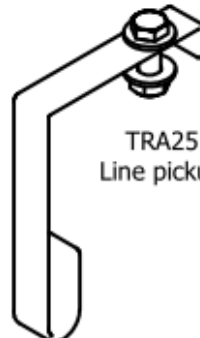
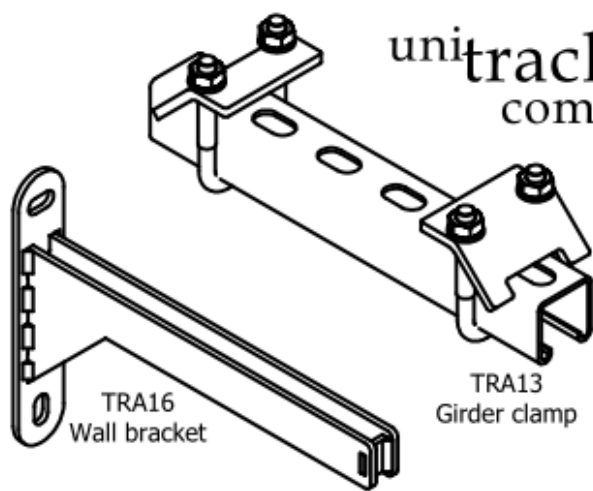


# uni track components



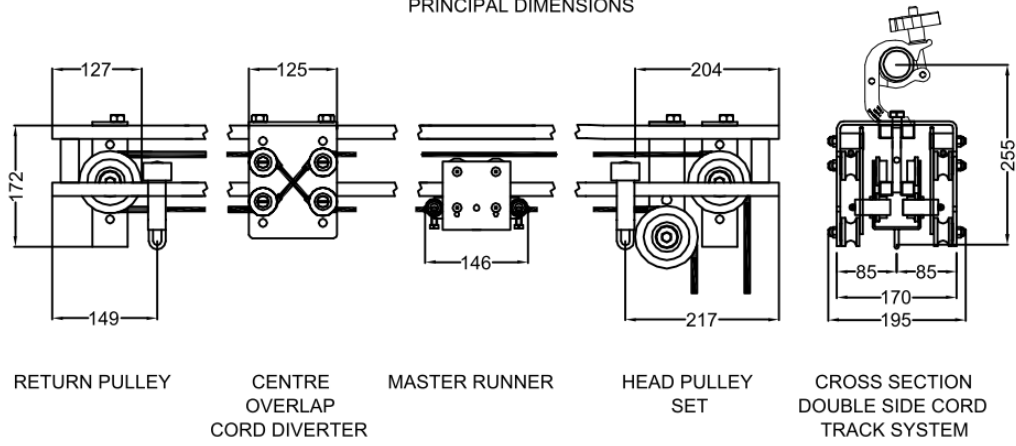


# uni**track** components





UNITRACK  
SIDE CORD  
PRINCIPAL DIMENSIONS



RETURN PULLEY

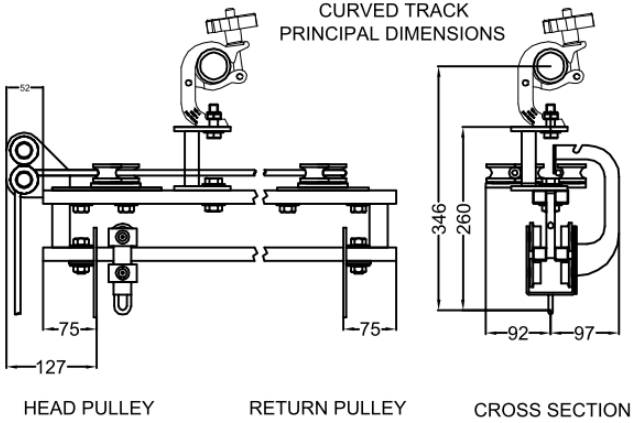
CENTRE  
OVERLAP  
CORD DIVERTER

MASTER RUNNER

HEAD PULLEY  
SET

CROSS SECTION  
DOUBLE SIDE CORD  
TRACK SYSTEM

UNITRACK  
CURVED TRACK  
PRINCIPAL DIMENSIONS

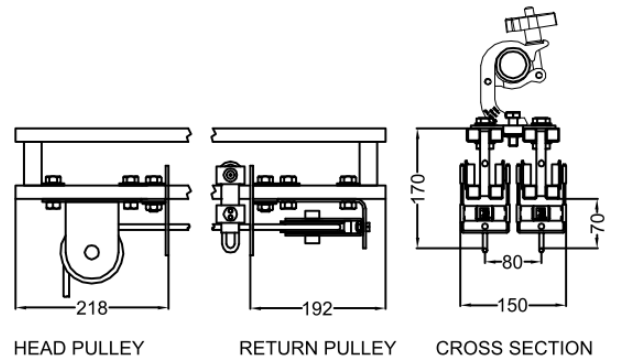


HEAD PULLEY

RETURN PULLEY

CROSS SECTION

UNITRACK  
STRAIGHT TRACK  
PRINCIPAL DIMENSIONS

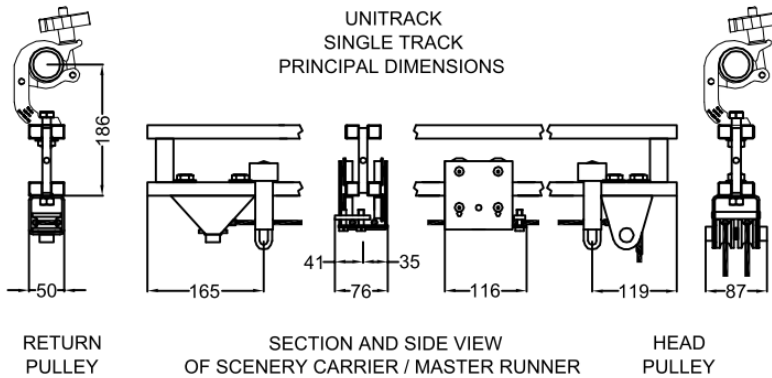


HEAD PULLEY

RETURN PULLEY

CROSS SECTION

UNITRACK  
SINGLE TRACK  
PRINCIPAL DIMENSIONS

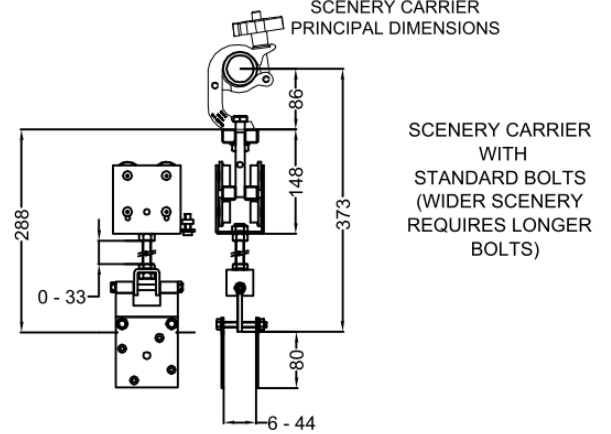


RETURN  
PULLEY

SECTION AND SIDE VIEW  
OF SCENERY CARRIER / MASTER RUNNER

HEAD  
PULLEY

UNITRACK  
SCENERY CARRIER  
PRINCIPAL DIMENSIONS



SCENERY CARRIER  
WITH  
STANDARD BOLTS  
(WIDER SCENERY  
REQUIRES LONGER  
BOLTS)