



metreel

**ENCLOSED TRACK
FESTOON SYSTEM**

www.metreel.co.uk



INTRODUCTION TO ENCLOSED FESTOON SYSTEM

Metreels enclosed track cable/hose festoon systems provide a safe and economical means of supplying power to cranes, hoists and moving machinery travelling along fixed tracks.

Suitable for carrying flatform cables, roundform cables or flexible hoses supplying electrical current, compressed air, gases and liquids.

FEATURES

- ✓ Safe and reliable.
- ✓ Simple to install or modify.
- ✓ Enclosed self cleaning track.
- ✓ Minimum maintenance.

OPTIONAL EXTRAS

- ✓ Mounting brackets and fittings.
- ✓ Strain relief cords/wires/webbing.
- ✓ Loop Clamps.
- ✓ Pendant Pushbuttons with Mobile Boxes or Plug/Socket units.
- ✓ Track Curves.
- ✓ Installation Service.

SPECIAL FEATURES

- ✓ Special Finishes.
- ✓ Stainless Steel Components.
- ✓ Waterproof and/or stainless steel wheels.
- ✓ Systems designed for use in hazardous explosive environments.
- ✓ Bespoke Service - Systems designed to customers specific requirements.

Enclosed Track System	Kg	Kg/m	mm - Max	mm - Max	°C	m/min
100 Series - Nylon Wheels	6	100	60 × 20	N/A	-10 to +85	30
100 Series - Steel Wheels	10	100	80 × 40	24	-30 to +80	50
300 Series	30	160	125 × 40	43	-30 to +80	125
400 Series	40	200	200 × 60	60	-30 to +80	150
500 Series	80	500	150 × 40	60	-30 to +80	180
600 Series	100	1000	200 × 60	60	-30 to +80	180

fig. 1

Our aim has been to cover the majority of system requirements with a standard range.

However for applications outside these parameters such as systems requiring curved track sections or our bespoke service please consult our sales office.

MET-TRACK® Enclosed track festoon systems are suitable for carrying a varied arrangement of cables and hoses, following the steps outlined in this brochure will ensure the correct selection to suit your application requirements.



STEP 1: CABLE SELECTION

The following tables and data are included to assist selection of the required cable for your application. If preferred our sales office would be pleased to carry out selection on your behalf.

On determining the motor size select the cable(s) according to the number of cores and required current, taking into account whether further derating is necessary according to temperature, lay-up or uprating allowable according to motor time rating.

For continuous current ratings of individual cable types, refer to the relevant cable section of this brochure.

Nominal Currents for Standard Motors											
Nominal Load of motor		A.C						D.C			
		Efficiency	Power Factor cos	Full Load Current (Amps)				Efficiency	Full Load Current (Amps)		
kW	H.P			220V	380V	415V	500V		110V	220V	440V
0.75	1	0.72	0.78	3.6	2.1	1.9	1.6	0.72	9.5	4.8	2.4
1.1	1.5	0.77	0.80	4.7	2.8	2.6	2.1	0.75	13.4	6.7	3.4
1.5	2	0.79	0.81	6.2	3.6	3.3	2.7	0.77	17.8	8.9	4.5
2.2	3	0.81	0.82	8.7	5.1	4.7	3.9	0.79	25.5	12.7	6.4
3	4	0.83	0.83	11.5	6.7	6.2	5.1	0.81	34	16.9	8.5
4	5.5	0.85	0.84	14.7	8.6	8.0	6.5	0.82	45	22.5	11.1
5.5	7.5	0.87	0.84	19.8	11.5	10.7	8.7	0.83	61	30.5	15.1
7.5	10	0.88	0.85	26.5	15.3	14.2	11.6	0.84	82	41	20.5
11	15	0.89	0.85	38.5	22.5	20.9	16.9	0.85	118	59	29.5
15	20	0.90	0.86	51	29.5	27.5	22.5	0.86	159	80	40
18.5	25	0.91	0.87	63	42	39	32	0.87	229	115	58
30	40	0.91	0.87	99	58	54	44	0.88	310	115	78
37	50	0.92	0.88	120	70	65	53	0.88	380	190	95
45	60	0.92	0.88	146	85	79	65	0.89	460	230	115
55	75	0.92	0.88	177	103	96	78	0.90	555	278	139
75	100	0.93	0.89	238	138	128	105	0.91	750	375	188
90	125	0.93	0.89	284	165	153	125	0.92	890	445	223
110	150	0.94	0.89	346	200	186	152	0.93	1080	540	269

fig 1 - For Ref: kW = 1.36HP IHP = 0.736kW

VOLT DROP

For longer applications volt drop can be a critical factor when selecting cable. Please consult our sales office for the appropriate advice/information.

Rating	Factor
Half Hourly	1.7
Hourly	1.4
S3 25%	2.0
S3 40%	1.58
S3 60%	1.29

fig. 2

TIME RATING CORRECTION

In many applications the motors being fed are short time rated. For these circumstances the continuous current capacity of the cable can be up rated (following temperature correction) with the following factors shown in fig.2.

Cable Layers	Factor
2	0.80
3	0.70
4	0.65
5	0.60
6	0.57

fig. 3

DE-RATING FOR LAYERS OF FLAT CABLE

The use of multicore cables to carry currents i.e. above 4 cores and/or the layering of flat cables at trolley clamping positions in particular can induce local heating due to the enclosed situation. As a guide the de-rating factors, shown in fig. 3, should be applied to the continuous current ratings to calculate the revised current rating. For situations where more than 4 cores are carrying current in a single cable, refer to our sales office for the appropriate advice/information.

TEMPERATURE CORRECTION

Standard current ratings for cables are based on 30°C ambient temperature. For higher temperatures the following de-rating factors should be applied to the continuous current rating to calculate the revised current rating. (see fig. 4)

Ambient Temp °C	Factor		
	PVC/PVC	EPR/PCP	EPR/CSP
30	1.00	1.00	1.00
35	0.94	0.95	0.95
40	0.87	0.89	0.90
45	0.79	0.89	0.85
50	0.71	0.77	0.80
55	0.61	0.71	0.74
60	0.50	0.63	0.67
65	0.35	0.55	0.60
70	.	0.45	0.52
75	.	0.32	0.43
80	.	.	0.30

fig. 4

MINIMUM BEND RADIUS (MBR)

The MBR can vary according to cable types and/or installations. Manufacturer's recommendations should be obtained and observed. As a guide the following MBR factors can be considered

Flexible Platform Cables	Flexible Roundform Cables	Flexible Hoses
5 x Cable Thickness	Light/Medium Duty 5x Cable Diameter Heavy Duty 6-8 x Cable Diameter	10-12 x Bore Diameter

IMPORTANT INFORMATION

- 'Flexible' refers to the use of finely stranded copper cores and therefore cables suited to constant flexing use/duty.
- Hoses considered for festoon applications should be according to manufacturers recommendations.
- After determining the required cable performances refer to the platform cable section, to select the appropriate cable/s for your application.
- Due to the wide variety of round cables and hoses we regret it is not possible to include data sheets within this brochure, please consult our sales office for further details.
- Some standard forms of PVC/PVC roundform cable are not suited for festoon use, unless on an extremely light duty application. For further clarification please consult our sales office.

STEP 2: SYSTEM SELECTION

STAGE 1

Determine your cable stack dimensions for a flatform cable system or the cable/hose diameter/s for a roundform festoon system.

STAGE 2

Select the appropriate trolley to suit previously selected cable(s)/hose(s) taking into account the minimum bend radius as outlined in the earlier section. To assist in the selection of the appropriate trolley, a table is included which gives a general summary of the standard cable trolleys available and their capacity (see figs. 5 & 6).

Flatform Cable

Overall Cable Dimensions	Support Plate	Trolley	To Suit Profile
upto 60mm x	25	100/50N	100
	25	100/137	100
upto 80mm x	40	100/237	100
upto 80mm x	40	100/237/R200/S	100
	40	237/R200/S	200
upto 80mm x	40	100/237/R200/L	100
upto 60mm x	45	337	400
upto 80mm x	45	437	300
upto 100mm x	45	337/1	300
	45	437/1	400
upto 125mm x	45	337/2	300
upto 150mm x	45	437/2	400
	70	537	500
upto 165mm x	45	437/3	400
upto 200mm x	45	437/4	400
	70	637	600

fig 5

Roundform Cable

Overall Cable Dimensions	Support Plate Radius	Trolley	To Suit Profile
8-15mm Diameter	65	135	100
	65	100/235	100
	65	235	200
	65	335	300
	65	435	400
	65	535	500
16-24mm Diameter	65	635	600
	80	135	100
	80	100/235	100
	80	235	200
	80	335	300
	80	435	400
25-32mm Diameter	80	535	500
	80	635	600
	100	235	200
	100	335	300
	100	435	400
	100	535	500
33-43mm Diameter	100	635	600
	120	335	300
	120	435	400
	120	535	500
44-60mm Diameter	120	635	600
	170	435	400
	170	535	500
	170	635	600

fig 6

STAGE 3

Considering the loop depth/length and the cable/hose weight check total load is within trolley capacity.

STAGE 4

Calculate number of trolleys (N) required. To enable you to accurately carry out this calculation you need to have available the preferred loop depth, maximum available loop depth, total track length and the total travel required.

Preferred Loop Depth:

Max. Loop Depth Available:

Total Track Length:

Total Track Required:

Firstly calculate number of trolleys using the total track length and preferred loop depth as shown below

$$N = \frac{\text{Track Length} + 10\%}{2 \times \text{Loop Depth (round up to next whole number)}} - 1$$

Using the number of trolleys obtained from this calculation lookup the storage distance required from the table on the few last pages of the **Met-Track®** Enclosed festoons chapter. Deduct this storage distance from the total track length. This will leave you with a figure which represents the total travel available.

If this figure is greater than the actual total travel required then proceed to step 5.

(If the figure is far greater than required then you may want to consider reducing either the total track length (track length required = storage distance + total travel required) or alternatively reducing the loop depth, this is not necessary but may make some small cost savings on components).

If the total travel distance is insufficient for your application, consider increasing the loop depth to reduce the number of trolleys required or alternatively increase the total track length. Recalculate the number of trolleys as shown above.

If you have had to change the loop depth, ensure that you check that total load per trolley is still appropriate to the trolley selected.

If you cannot find a solution due to the limits of your installation dimensions, please consult our sales office as we will be able to offer further advice.

Please Note: Roundform trolleys have swivelling cable supports to allow the coil formation of loops necessary to keep the system storage distance to a minimum. A check should be made to ensure that sufficient clearance exists on each side of the track to accommodate this movement (approximate clearance required equals half the system loop depth each side of the track).

STAGE 5

A check should now be made to ensure that the track size selected is capable of carrying the maximum ambushed trolley loads i.e. in the storage area and paying in pick up.

$$\frac{\text{Support Distance}}{\text{Trolley Length}} \times \text{trolley Load}$$

To do this you need to determine your preferred distance between track supports, the total trolley load i.e. cable weight plus actual trolley weight and the trolley length.

Using the formula shown above calculate the load between support centres.

Using the graph (fig.7 & 8) check that the load between the supports is not greater than the permissible load. This is achieved by selecting your preferred support centre distance on the horizontal axis and reading upwards until the point where it intersects with the curved line representing your selected track size. The maximum load between supports is read by following this point horizontally towards the left hand side of the graph. The load determined in the formula above must be less than or equal to this figure.

Trolley Type	= 337
Trolley length	= 150 mm
Actual Load Per Trolley (including trolley weight)	= 6.78kgs
Preferred Support Centre Distance	= 1500 mm

Therefore load between supports =

$$\frac{1500}{150} \times 6.78 = 67.8 \text{ kgs}$$

This figure is less than the figure achieved on the graph of 75 kgs

STEP 2: SYSTEM SELECTION continued

Should your calculated figure be higher than the permissible load then it will be necessary to either reduce the support distance centres or select the next size track. The latter will obviously require a re-selection of trolley and may prove a more expensive option. Please check all calculations again.

STAGE 6

Calculate the length of track required for the system, this may have already been determined during step 4. If not then use the following formula: -

Track Length =

Total Travel + Storage Distance
(See Fig 9 and 10 on the next page).

The number of profile lengths required is equal to the track length divided by the profile length in metres. Profile lengths are available as standard in 5 or 3 metres.

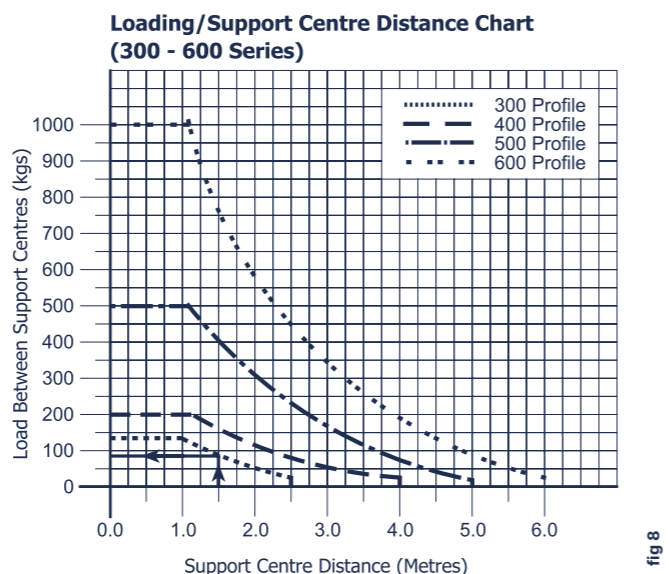
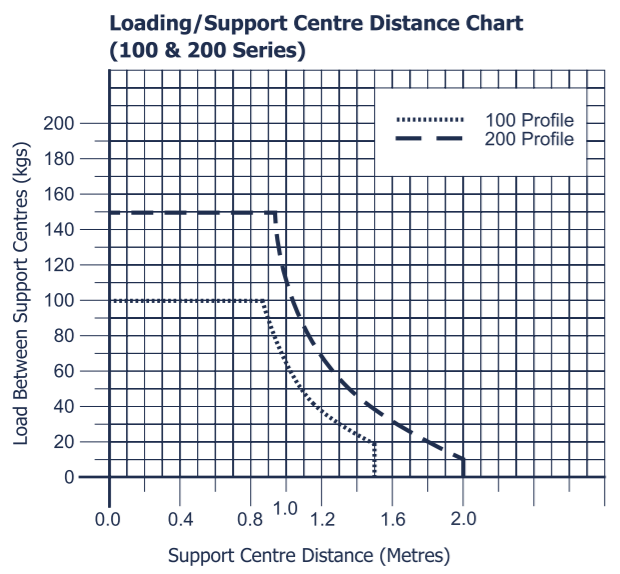
For example:

Our 337 system with a total travel of 60 metres having 21 trolleys, gives us a storage distance of 3916mm (from on the few last pages of the **Met-Track®** Enclosed festoons chapter) inc tow trolley & end clamp. This added to the total travel of 60 metres gives us a total track length of 63.92 metres.

Therefore:

Total Track Length = 63.92 metres
Number of tracks (Utilising standard lengths)

= 11 x 'Part No' 300/6-HZ = 66 Metres



STAGE 7

Number of splice joints is one less than the number of standard track lengths. Adjustment screws are provided to enable joints to be correctly aligned.

STAGE 8

Calculate the number of support brackets required as follows:

$$\frac{\text{Track length}}{\text{Support Distance (Rounded up to the next whole number)}} + 1$$

Note. In the storage distance position we recommend support centres are reduced to half the above stated spacings. If you would prefer our sales engineers to carry out the appropriate festoon selection for you and at the same time prepare a quotation for your consideration, simply contact us directly on +44 (0)115 930 6263 or email sales@metreel.co.uk.

APPLICATIONS

CONTROL APPLICATION

(Typical using flatform cable)

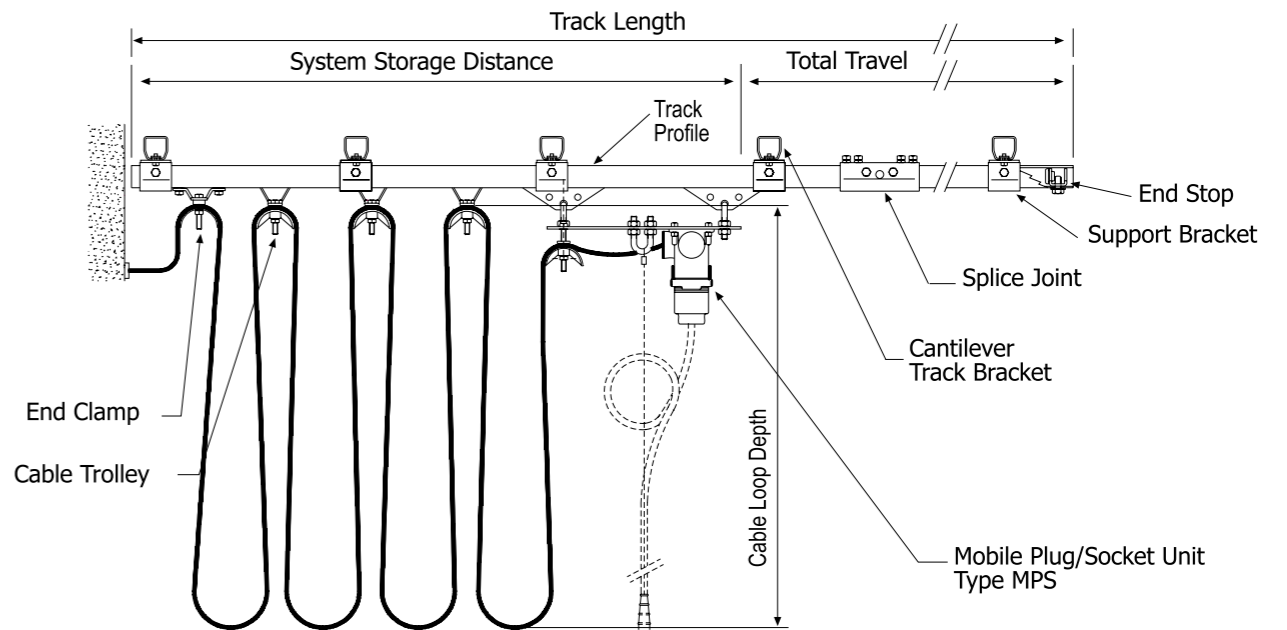


fig 9

POWER APPLICATION

(Typical using flatform cable)

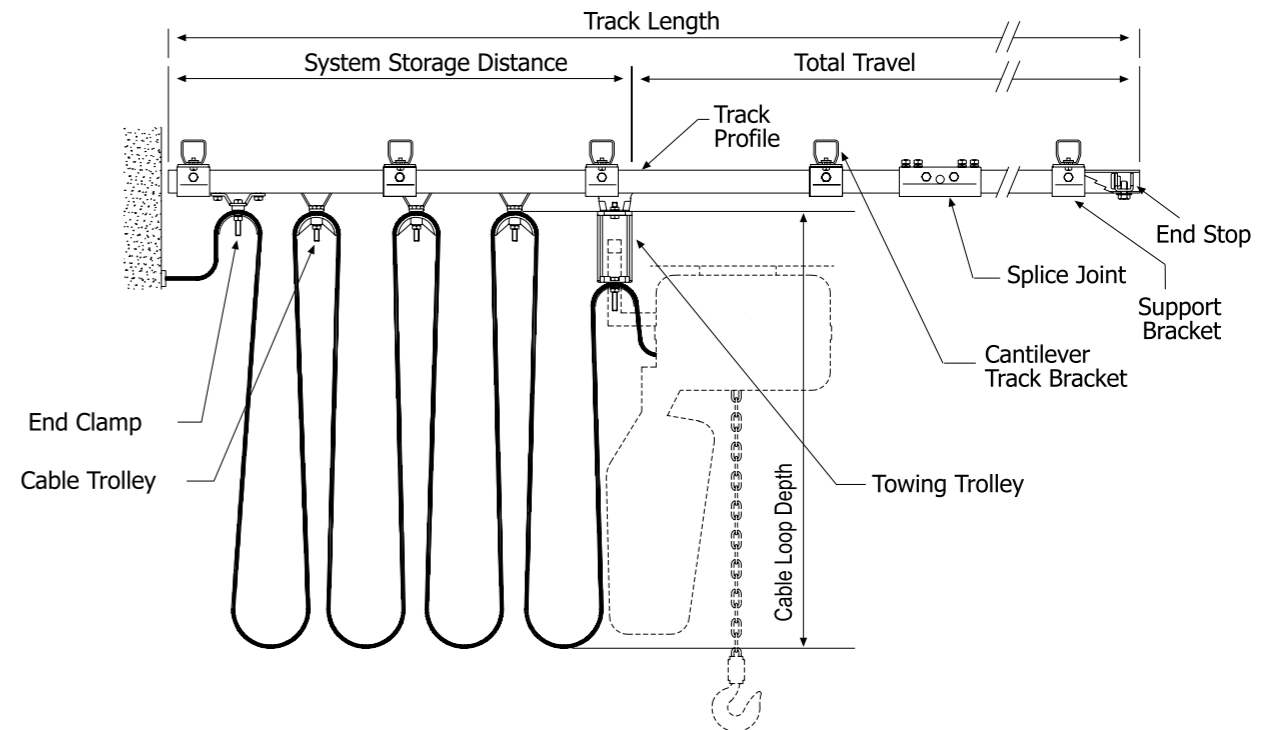
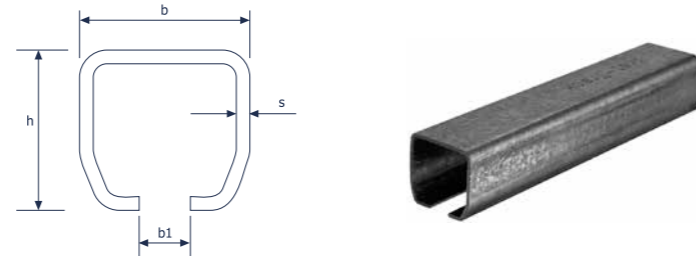


fig 10

COMPONENT DETAIL

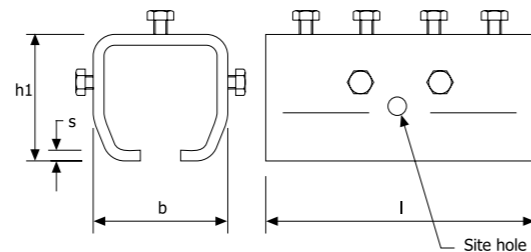
TRACK PROFILE

Profile	Weight (kg/m)	Dimensions (mm)			
		h	b	b1	s
100	1.280	29.5	30	9	1.6
300	2.520	35	40	11	2.9
400	3.570	43.5	48.5	15	3.2
500	5.640	60	65	18	3.6
600	8.800	75	80	22	4.5



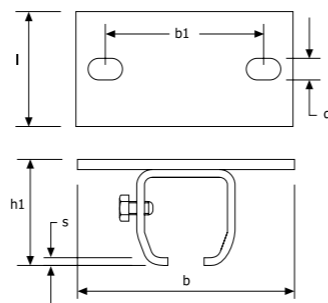
SPLICE JOINT

Part No.	To Suit Profile	Weight (kg)	Dimensions (mm)			
			h1	b	s	l
1103	100	0.285	36	38	3	100
1303	300	0.600	45	50	4	120
1403	400	1.000	54	60	4.5	150
1503	500	2.100	75	80	6	180
1603	600	3.800	94	100	8	200



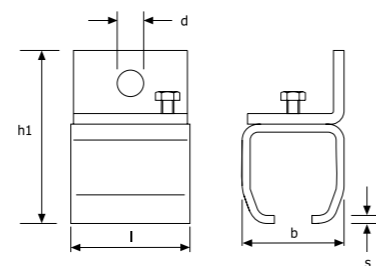
CEILING SUPPORT BRACKET

Part No.	To Suit Profile	Weight (kg)	Dimensions (mm)					
			h1	b	b1	s	l	d
102	100	0.185	39	90	65	3	40	9
302	300	0.350	48.7	115	80	4	50	11
402	400	0.600	59.5	130	94	4.5	60	13
502	500	1.500	81	170	124	6	80	17
602	600	2.900	104	210	148	8	100	22



WALL SUPPORT BRACKET

Part No.	To Suit Profile	Weight (kg)	Dimensions (mm)				
			h1	b	s	l	d
101	100	0.300	62	38	3	40	9
301	300	0.250	76	50	4	55	11
401	400	0.450	94	60	4.5	68	13
501	500	1.400	123	80	6	90	17
601	600	2.500	157	100	8	110	22

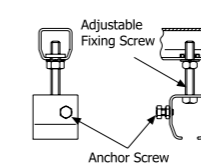
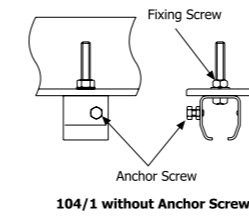
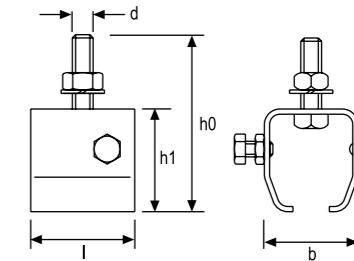


SINGLE BOLT SUPPORT BRACKET

Part No.	To Suit Profile	Weight (kg)	Dimensions (mm)				
			h0	h1	b	l	d
104	100	0.135	70	35	38	40	8

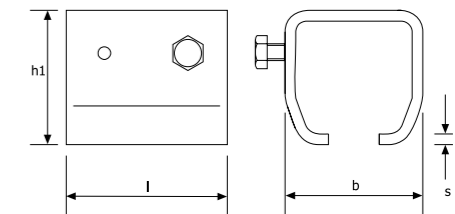
104
Single Fix Anchor Support Bracket, for use with angle cantilevers.

104/4
Adjustable Single Fix Anchor Support Bracket, for use with **Met-Track®** cantilevers.



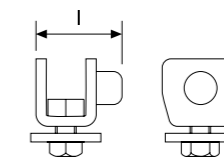
PLAIN SUPPORT BRACKET

Part No.	To Suit Profile	Weight (kg)	Dimensions (mm)			
			h1	b	s	l
1104	100	0.110	36	38	3	40
1304	300	0.300	45	50	4	55
1404	400	0.400	54	60	4.5	68
1504	500	1.000	75	80	6	90
1604	600	2.100	94	100	8	110

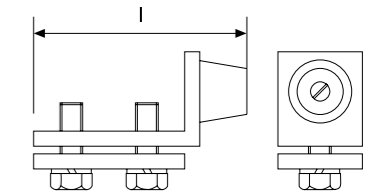


END STOP

Part No.	To Suit Profile	Weight (kg)	Dimensions (mm)
			l
100P	100	0.040	28
300P	300	0.040	33
400P-HS	400	0.120	33
1500P-HS	500	0.250	50
1600P-HS	600	1.100	130



100P-400P-HS

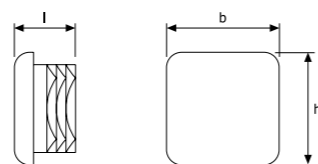


1600P-HS
1500P-HS

COMPONENT DETAIL continued

END CAP (100/200 Series only)

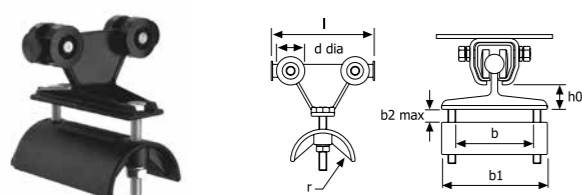
Part No.	To Suit Profile	Weight (kg)	Dimensions (mm)		
			h	b	l
100ECP	100	0.005	29.5	29.5	16



FLAT CABLE TROLLEY for waterproof wheels add / SS to part number

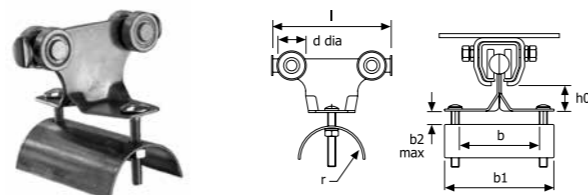
Part No.	To Suit Profile	Cable Capacity (mm)	Weight (kg)	Dimensions (mm)						
				h0	l	d	b	b1	b2	r
100/50N	100	60x20	0.125	22	80	22	60	82	20	25
100/137	100	60x20	0.250	22	90	22	60	82	20	25
100/237	100	80x22	0.500	45	125	22	80	102	22	40
100/237/R200S	100	80x28	0.510	45	145	22	80	102	28	40
100/237/R200L	100	80x40	0.520	45	169	22	80	102	40	40
337	300	60x40	0.825	46	150	28	60	94	40	45
337/1	300	100x40	1.145	46	180	28	100	135	40	45
337/2	300	125x40	1.200	46	180	28	125	160	40	45
437	400	80x40	1.205	54	180	33.5	80	115	40	45
437/1	400	100x40	1.250	54	180	33.5	100	135	40	45
437/2	400	150x40	1.680	54	226	33.5	150	185	40	45
437/3	400	165x50	1.720	54	226	33.5	165	200	50	45
437/4	400	200x60	2.155	54	226	33.5	200	235	60	45
537	500	150x40	2.880	58	226	48	150	190	40	70
637	600	200x60	4.140	65	226	60	200	240	60	70

100/50N



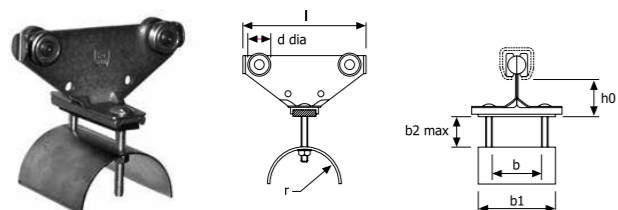
Chassis/Clamp black Polyamide, Acetal Wheels, Axles & Clamp Screws - Steel, Zinc Plated

100/137



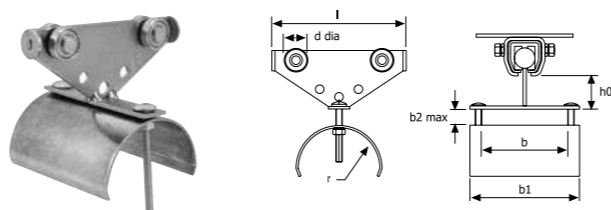
Chassis/Clamp - Steel, Zinc Plated with Passivation, Dustproof Wheels, Fasteners - Steel, Zinc Plated

337 - 637



Chassis/Clamp - Steel, Zinc Plated with Passivation, Dustproof Wheels, Fasteners - Steel, Zinc Plated

100/237



Chassis/Clamp - Steel, Zinc Plated with Passivation, Dustproof Wheels, Fasteners - Steel, Zinc Plated

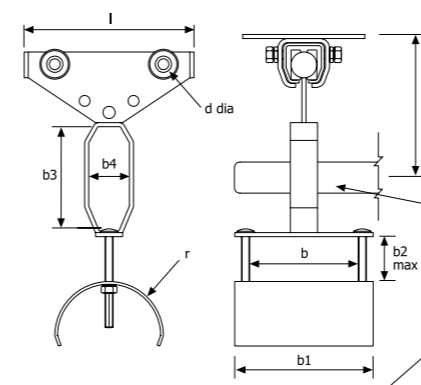
TOWING TROLLEY

Part No.	To Suit Profile	Finish	Cable Capacity (mm)	Weight (kg)	Dimensions (mm)								
					h0	l	d	b	b1	b2	b3	b4	r
100/50TAN	100		60x20	0.185	100	80	22	60	82	20	70	30	25
100/137TAS	100		60x20	0.48	100	90	22	60	82	20	70	30	25
100/237M	100		80x22	0.600	102	125	22	80	102	22	76	30	40
100/237M/R200S	100		80x28	0.610	102	145	22	80	102	28	76	30	40
100/237M/R200L	100		80x40	0.620	102	169	22	80	102	40	76	30	40
337M	300	Chassis/ Clamp Steel, Zinc Plated with Passivation	60x40	1.365	41	260	28	60	94	40	70	40	45
337M/1	300		100x40	1.540	41	260	28	100	135	40	70	40	45
337M/2	300		125x40	1.595	41	260	28	125	160	40	70	40	45
437M	400	Dustproof Wheels and Fasteners, Bright Zinc Plated	80x40	1.690	46	260	33.5	80	115	40	70	40	45
437M/1	400		100x40	1.730	46	260	33.5	100	135	40	70	40	45
437M/2	400		150x40	1.925	46	260	33.5	150	185	40	70	40	45
437M/3	400		165x50	1.960	46	260	33.5	165	200	50	70	40	45
437M/4	400		200x60	2.455	51	280	33.5	200	235	60	70	40	45
537M	500		150x40	4.075	58	366	48	150	190	40	11	80	70
637M	600		200x60	5.360	65	366	60	200	240	60	11	80	70

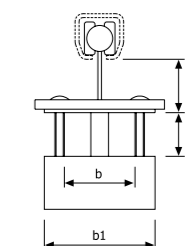
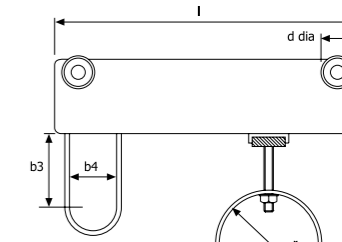
Option: for waterproof wheels add / SS to part number

name??

STYLE 337-637



Recommended tow arm position size 25 mm diameter max.



COMPONENT DETAIL continued

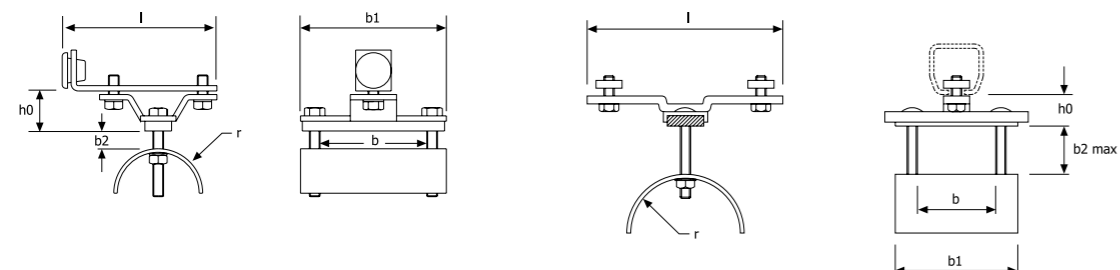
END CLAMP

Part No.	To Suit Profile	Cable Capacity (mm)	Weight (kg)	Dimensions (mm)					
				h0	l	b	b1	b2	r
100/137E	100	60x20	0.235	19	90	60	82	20	25
337E	300	60x40	0.630	26	150	60	94	40	45
337E/1	300	100x40	0.775	26	150	100	135	40	45
337/2	300	125x40	0.860	26	150	125	160	40	45
437E	400	80x40	0.730	26	150	80	115	40	45
437E/1	400	100x40	0.775	26	150	100	135	40	45
437S/2	400	150x40	0.965	26	150	150	185	40	45
437E/3	400	165x50	1.000	26	150	165	200	50	45
437E/4	400	200x60	1.430	26	150	200	235	60	45
537E	500	150x40	1.890	21	220	150	190	40	70
637E	600	200x60	2.210	21	210	200	240	60	70

Finish: Chassis/Clamp steel, Zinc Plated with passivation Fasteners - Bright Zinc Plated

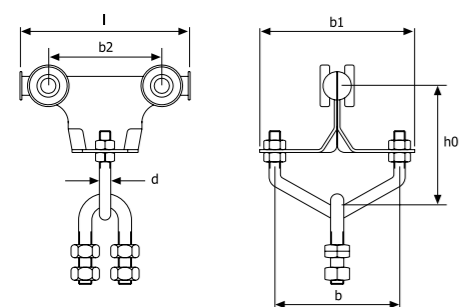
100/137E

337E - 637E



SUSPENSION TROLLEY

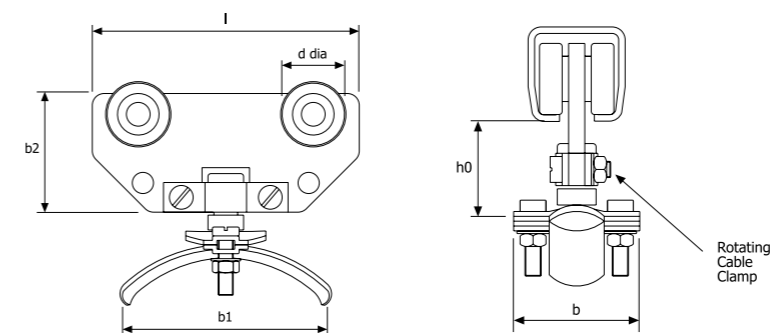
Part No.	To Suit Profile	Weight (kg)	Dimensions (mm)					
			h0	b	b1	b2	d	l
100/137ST	100	0.155	65	65	80	60	6	90



ROUND CABLE / HOSE TROLLEY

Part No.	To Suit Profile	Finish	Weight (kg)	Cable/Hose Dia. (mm)	Add. Tier Weight (kg)	Dimensions (mm)					
						h0	l	d	b	b1	b2
135	100	Chassis/ Clamp Steel, Zinc Plated with Passivation	0.260	8-15	0.050	32	90	22	39	70	40
135	100		0.310	16-24	0.124	36	90	22	50	100	40
100/235	100	Dustproof Wheels and Fasteners, Bright Zinc Plated	0.550	8-15	0.050	54	100	22	40	70	40
100/235	100		0.620	16-24	0.124	57	100	22	50	100	40
335	300	Chassis/ Clamp Steel, Zinc Plated with Passivation	0.540	8-15	0.050	42.5	100	28	39	70	60
335	300		0.585	16-24	0.124	47.5	100	28	50	100	60
335	300	Dustproof Wheels and Fasteners, Bright Zinc Plated	0.840	25-32	0.270	52.5	150	28	80	140	60
335	300		1.290	33-43	0.416	63	150	28	105	175	60
435	400	Chassis/ Clamp Steel, Zinc Plated with Passivation	0.715	8-15	0.050	47.5	100	33.5	39	70	70
435	400		0.755	16-24	0.124	52.5	100	33.5	50	100	70
435	400	Dustproof Wheels and Fasteners, Bright Zinc Plated	1.090	25-32	0.270	57.5	150	33.5	80	140	70
435	400		1.430	33-43	0.416	68	150	33.5	105	175	70
435	400	Chassis/ Clamp Steel, Zinc Plated with Passivation	2.320	44-60	0.562	73.5	150	33.5	125	240	70
535	500		1.450	8-15	0.050	54	170	48	39	70	90
535	500	Dustproof Wheels and Fasteners, Bright Zinc Plated	1.500	16-24	0.124	59	170	48	50	100	90
535	500		1.650	25-32	0.270	65	170	48	80	140	90
535	500	Chassis/ Clamp Steel, Zinc Plated with Passivation	2.100	33-43	0.416	74	170	48	105	175	90
535	500		2.950	44-60	0.562	81	170	48	125	240	90
635	600	Chassis/ Clamp Steel, Zinc Plated with Passivation	2.900	8-15	0.050	61	220	60	39	70	110
635	600		2.950	16-24	0.124	66	220	60	50	100	110
635	600	Dustproof Wheels and Fasteners, Bright Zinc Plated	3.100	25-32	0.270	74	220	60	80	140	110
635	600		3.550	33-43	0.416	81	220	60	105	175	110
635	600	Chassis/ Clamp Steel, Zinc Plated with Passivation	4.400	44-60	0.562	88	220	60	125	240	110

Option - for waterproof wheels add / SS to part number. The number and size of cable clamps should be shown after the Part No e.g. 335 (2 x 8-15). Max Recommended 3 tiers.

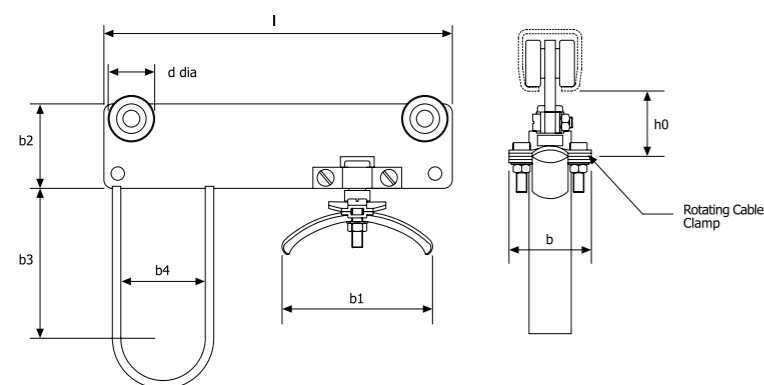


COMPONENT DETAIL continued

ROUND CABLE / HOSE TOWING TROLLEY

Part No.	To Suit Profile	Finish	Weight (kg)	Cable/Hose Dia. (mm)	Add. Tier Weight (kg)	Dimensions (mm)							
						h0	l	d	b	b1	b2	b3	b4
135M	100		0.510	8-15	0.050	35	165	22	39	70	40	70	40
135M	100		0.560	16-24	0.124	39	165	22	50	100	40	70	40
100/235M	100		1.050	8-15	0.050	57	165	22	40	70	40	70	40
100/235M	100		1.100	16-24	0.124	61	165	22	50	100	40	70	40
335M	300		0.990	8-15	0.050	42.5	225	28	39	70	60	70	40
335M	300		0.050	16-24	0.124	47.5	225	28	50	100	60	70	40
335M	300		1.190	25-32	0.270	52.5	225	28	80	140	60	70	40
335M	300		1.780	33-43	0.416	63	310	28	105	175	60	70	40
435M	400	Chassis/ Clamp Steel, Zinc Plated with Passivation	1.325	8-15	0.050	47.5	260	33.5	39	70	70	70	40
435M	400		1.380	16-24	0.124	52.5	260	33.5	50	100	70	70	40
435M	400		1.510	25-32	0.270	57.5	260	33.5	80	140	70	70	40
435M	400		2.040	33-43	0.416	68	310	33.5	105	175	70	70	40
435M	400	Dustproof Wheels and Fasteners, Bright Zinc Plated	2.930	44-60	0.562	73.5	310	33.5	125	240	70	70	40
535M	500		3.000	8-15	0.050	54	360	48	39	70	90	70	40
535M	500		3.100	16-24	0.124	59	360	48	50	100	90	110	80
535M	500		3.200	25-32	0.270	65	360	48	80	140	90	110	80
535M	500		3.650	33-43	0.416	74	360	48	105	175	90	110	80
535M	500		4.550	44-60	0.562	81	360	48	125	240	90	110	80
635M	600		4.550	8-15	0.050	61	360	60	39	70	110	110	80
635M	600		4.650	16-24	0.124	66	360	60	50	100	110	110	80
635M	600		4.750	25-32	0.270	74	360	60	80	140	110	110	80
635M	600		5.200	33-43	0.416	81	360	60	105	175	110	110	80
635M	600		6.150	44-60	0.562	88	360	60	125	240	110	110	80

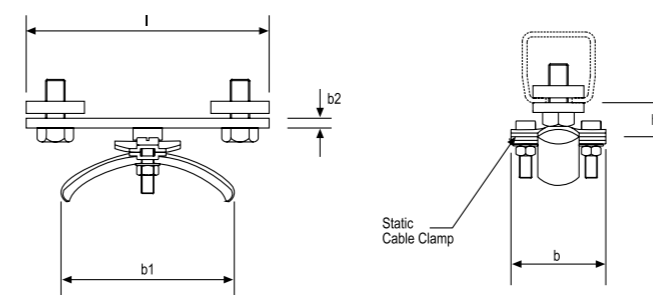
Option - for waterproof wheels add / SS to part number. The number and size of cable clamps should be shown after the Part No e.g. 335M (2 x 8-15). Max Recommended 3 tiers.



ROUND CABLE / HOSE END CLAMP

Part No.	To Suit Profile	Finish	Weight (kg)	Cable/Hose Dia. (mm)	Add. Tier Weight (kg)	Dimensions (mm)				
						h0	l	b	b1	b2
135E	100		0.150	8-15	0.050	15	100	40	70	4
135E	100		0.200	16-24	0.124	19	100	50	98	4
100/235E	100		0.380	8-15	0.050	37	100	40	70	4
100/235E	100		0.800	16-24	0.124	41	100	50	98	4
335E	300		0.285	8-15	0.050	29	150	39	70	5
335E	300		0.325	16-24	0.124	26	150	50	100	5
335E	300		0.710	25-32	0.270	32	210	80	140	6
335E	300		1.050	33-43	0.416	42.5	210	105	175	6
435E	400	Chassis/ Clamp Steel, Zinc Plated with Passivation	0.285	8-15	0.050	29	150	39	70	5
435E	400		0.325	16-24	0.124	26	150	50	100	5
435E	400		0.710	25-32	0.270	32	210	80	140	6
435E	400		1.050	33-43	0.416	42.5	210	105	175	6
435E	400	Fasteners, Bright Zinc Plated	1.940	44-60	0.562	48	210	125	240	6
535E	500		0.500	8-15	0.050	40.5	210	39	70	5
535E	500		0.500	16-24	0.124	37.5	210	50	100	5
535E	500		0.700	25-32	0.270	44.5	210	80	140	6
535E	500		1.100	33-43	0.416	53.5	210	105	175	6
535E	500		2.000	44-60	0.562	55.5	210	125	240	6
635E	600		0.750	8-15	0.050	47.5	210	39	70	5
635E	600		0.800	16-24	0.124	44.5	210	50	100	5
635E	600		0.950	25-32	0.270	53.5	210	80	140	6
635E	600		1.400	33-43	0.416	60.5	210	105	175	6
635E	600		2.300	44-60	0.562	62.5	210	125	240	6

The number and size of cable clamps should be shown after the Part No e.g. 335E (2 x 8-15). Max Recommended 3 tiers.



ACCESSORIES

MOBILE PENDANT PLUG/SOCKET UNIT

Part No.	To Suit Profile	Length (mm)
MPS100/16	100	350
MPS100/24	100	350

These simplified and compact units have been developed for applications using 16 or 24 way plug & sockets as standard. Special arrangements for 32 and 48 terminals are available - ask our sales office for details. The unit provides a quick and easy solution for changing cables on installations where the pendant suspension cables are prone to external damage, thus reducing production downtime.

Optional Extra

A brake/stop device is available provided that an additional length of 200mm can be accommodated. For details of this option please refer to our sales office.



TYPE MPS

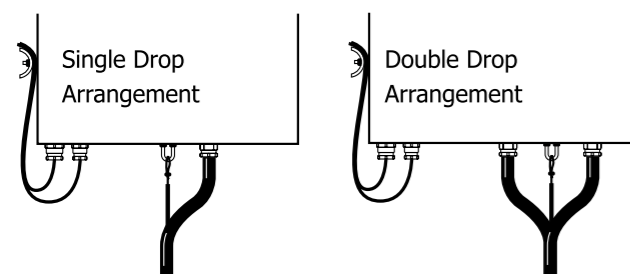
This unit offers a standard platform cable capacity of 60mm x 20mm, which will comfortably accept two 12 core 2.5mm² platform cables. The Plug/Socket has a predrilled cable gland offering direct entry to the socket housing.

Note: For more than 24 terminals on either unit please consult our sales office.

MOBILE PENDANT TERMINAL BOX

Our range of Mobile Pendant Terminal boxes and associated components have been developed specifically for cranes requiring remote pendant control. The alternative of single drop or double drop refers to the ability to accommodate 1 or 2 pendant suspension cables. Single drop has the facility for one cable gland whilst double drop has the facility for 2 cable glands.

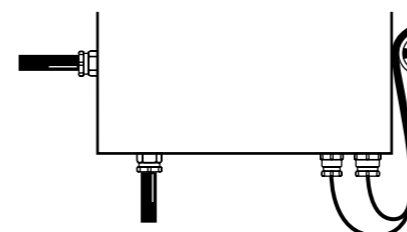
Type	Part No.	Track Profile	Length (mm)
Mobile Single Drop	MPB100/S	100	325
Mobile Double Drop	MPB100/D	100	400



Please Note:

When ordering please advise full details regarding terminal box specification, platform cable and pendant arrangements required. As standard a 12 way moulded terminal block is fitted.

TRACK MOUNTED TERMINAL BOX



Type	Part No.	Track Profile	Length (mm)
Track Mounting	TMB100	100	230

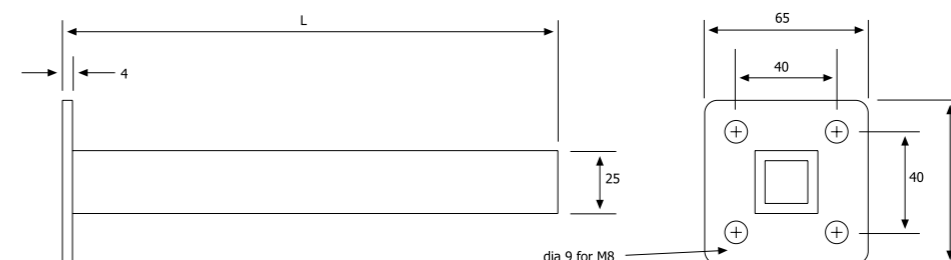
The Track Mounted Terminal Boxes have been developed specifically for cranes, to provide a simple means of connecting platform cable, at the end of a festoon system, to the mains supply.

Please Note:

When ordering please advise full details regarding terminal box specification, platform cable and pendant arrangements required. As standard a 12 way moulded terminal block is fitted.

TOWING ARM

Part No.	Dimension L (mm)	Weight (kg)
TA500	500	0.7
TA750	750	1.1

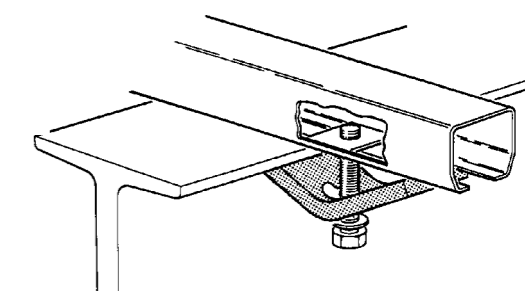
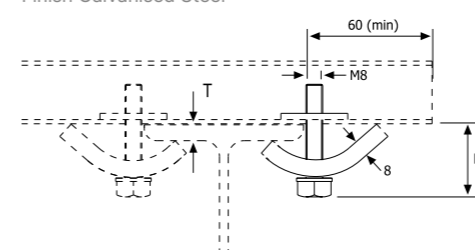


JOIST CLIP SET (includes clip, bolt, washer & square nut)

Normally 2 sets required per clamping position

Ref. Dimensions	Part No.							Weight (kg)
Clamping Screw	JC840 M8×40			JC850 M8×50				
Flange thickness T	4	6	8	10	12	16	20	0.150
Flange thickness H	31	32	33	34	35	37	40	0.150

Finish Galvanised Steel



ACCESSORIES continued

STRAINER ASSEMBLIES

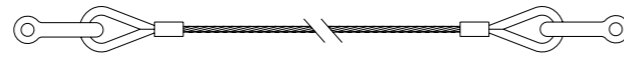
Finish Galvanised Steel

For systems where high accelerations exist, or for applications where it is required to protect the smaller cables against strain, a selection of standard strainer assemblies is available.

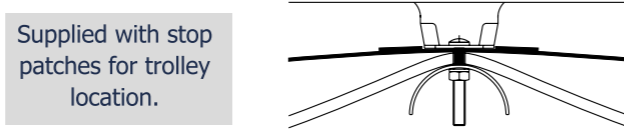
Available in Nylon Cord, Galvanised Steel Wire and Stainless Steel Wire. Each strainer comes complete with two 'D' shackles one for each end.

N.B. ALL STRAINERS ARE CALCULATED TO SUIT YOUR SPECIFIC SYSTEMS.

Strainer Cords



Webbing Strap Strainers



Supplied with stop patches for trolley location.

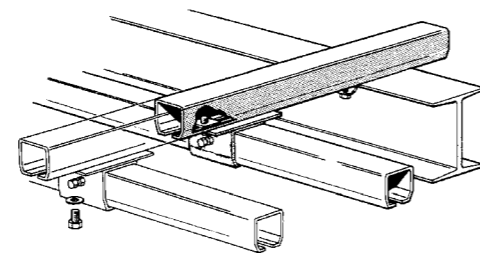
(Flatform Festoon Systems Only)

CANTILEVER TRACK BRACKET ASSEMBLIES

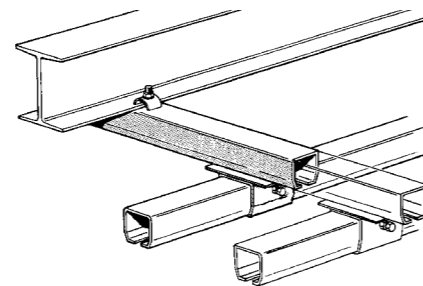
Part No.	Track Profile	Mounting Styles	Bracket Length (mm)
CTB100/TS	100	Top-Single	750
CTB100/TD	100	Top-Double	1000

Cantilever Track Bracket Assemblies provide an economical installation method, where the Festoon Systems are mounted alongside existing beam structures for example, Rolled Steel Joists & Beams.

The standard assemblies exclude the support brackets but include the supply of mounting screws and joist clip sets where applicable.



Top Mounting



Underside Mounting

CANTILEVER TRACK ONLY

In addition to the cantilever track bracket assemblies offered above, we also offer short lengths of our track for you to make your own cantilever bracket. These can be supplied in any length to suit your requirement. As standard we offer the lengths as shown. Non standard length part numbers can be created as follows: -

Part No.	Track Profile	Length (mm)
CTB100/0.5	100	500
CTB100/0.75	100	750
CTB100/1.00	100	1000
CTB100/1.50	100	1500

CANTILEVER TRACK BRACKET

The socket mounting has been developed for direct welding onto a crane structure, providing a simple and cost effective mounting option for cantilever track lengths. Available for 100 series track only.

Part No.	Track Profile	Weight (kg)
1103SP	100	0.7

