

**LEWMAR®**

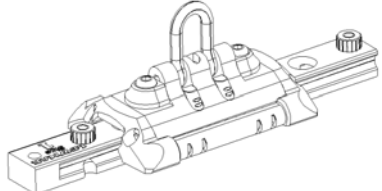
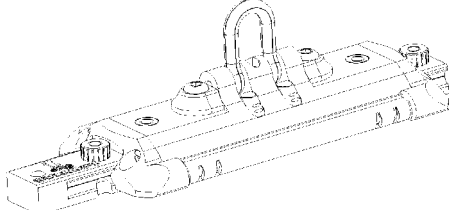
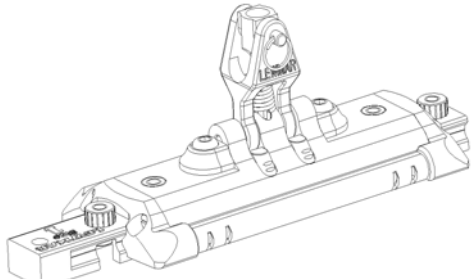
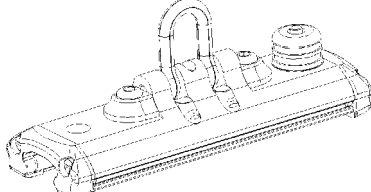
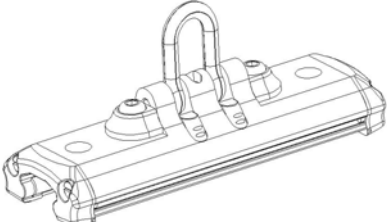
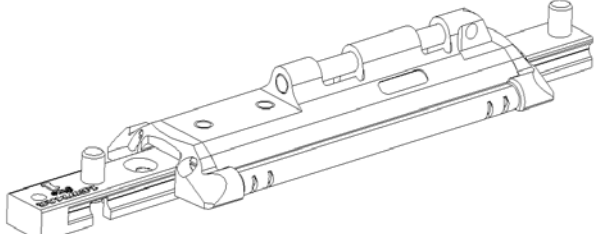
**NTR Traveller Range**

**Spares**

**&**

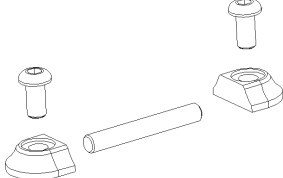
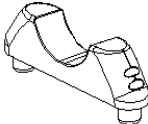
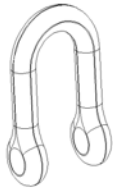
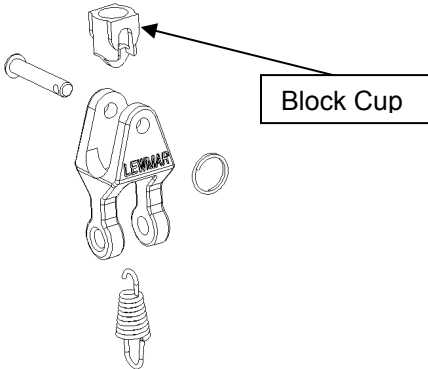
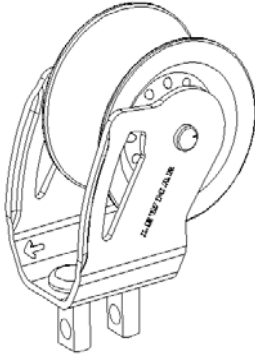
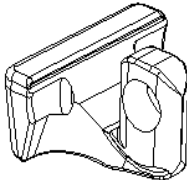
**Data**

## TRAVELER RANGE BUILD BLOCKS – CARS

<p><b>Short Car – Torlon balls – Shackle</b>                  29421300      SZ1 SHORTCAR TB SHKL                  29422300      SZ2 SHORTCAR TB SHKL                  29423301      SZ3 SHORTCAR TB SHKL</p>	
<p><b>Standard Car – Torlon Balls - Shackle</b>                  29431300      SZ1 CAR TB SHKL                  29432300      SZ2 CAR TB SHKL                  29433300      SZ3 CAR TB SHKL</p> <p>Size 1 Car, Shackle, Torlon Balls</p>	
<p><b>Standard Car – Torlon Balls - Upstand</b>                  29431400      SZ1 CAR TB UPS                  29432400      SZ2 CAR TB UPS                  29433400      SZ3 CAR TB UPS</p>	
<p><b>Standard Car – Slide Rod – Shackle – Plunger</b>                  29441723      SZ1 CAR SR SHKL PLUNGER                  29442723      SZ2 CAR SR SHKL PLUNGER                  Sz3 does exist but not without stirrup</p>	
<p><b>Standard Car – Slide Rod - Shackle</b>                  29431500      SZ1 CAR SR SHKL                  29432500      SZ2 CAR SR SHKL                  Sz3 does not exist</p>	
<p>28004474</p> <p>This car does not use pivot covers</p>	

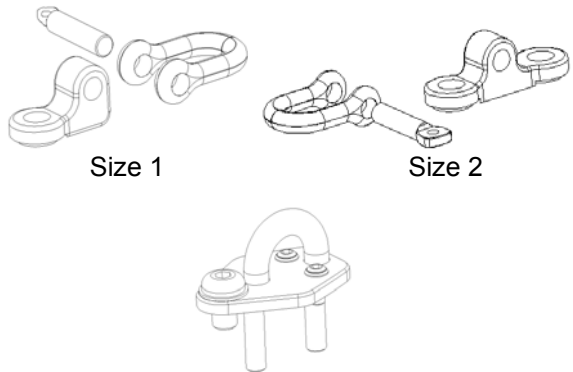

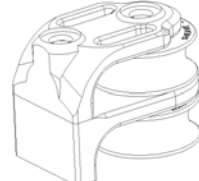
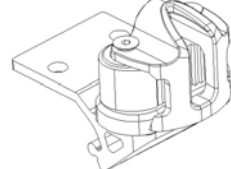
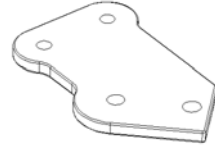

# TRAVELER RANGE BUILD BLOCKS

## PIVOT COVERS, UPSTANDS, SHACKLES, GENOA STIRRUUPS

<p><b>Rod &amp; Pivot End Cover Kit</b></p>	
<p><b>Upstand Buffers</b>                  25003492 SZ1                  25003494 SZ2                  25003494 SZ3 (same as size 2)</p>	
<p><b>Car Shackle</b>                  25000007 6MM CAR SHACKLE – used on Sz1                  25000047 8MM SHACKLE – used on Sz2 &amp; 3</p>	
<p><b>Upstand Kit</b>                  29171024 SZ1 UPSTAND CONVERSION                  29172024 SZ2 UPSTAND CONVERSION                  29173024 SZ3 UPSTAND CONVERSION</p> <p><b>Block Cup Only</b>                  25000027 SZ1 M/SHEET BLOCK CUP                  25000053 SZ2 M/SHEET BLOCK CUP                  25000115 SZ3 M/SHEET BLOCK CUP</p> <p><b>Spring Only</b>                  25000016 SZ1 UPSTAND SPRING                  25000057 SZ2 UPSTAND SPRING                  25000116 SZ3 UPSTAND SPRING</p>	 <p>Sz1 fits 60mm Synchro block                  Sz2 fits 72mm Synchro block                  Sz3 fits 90mm Synchro block</p>
<p><b>Genoa Stirrup</b>                  28003225 SZ1NTR GENOA STIRRUP ASSY                  28003226 SZ2 GENOA STIRRUP KIT (PB)                  28002231 S/S MK2 STIRRUP RIVETTED ASSY.</p>	
<p><b>Genoa Stirrup Angle Limiter</b>                  25003711 SZ1 MKII I/B LIMITER                  25003712 SZ2 MKII I/B LIMITER</p> <p>No limiter available for size 3</p>	

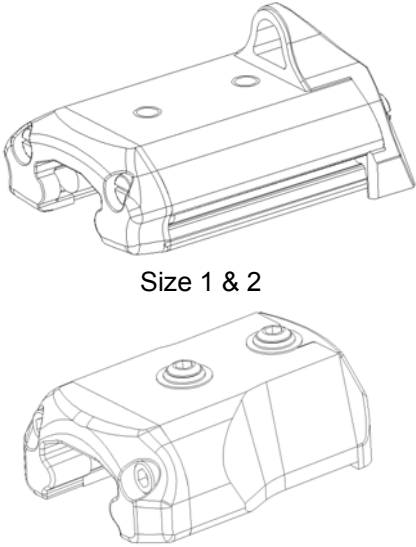
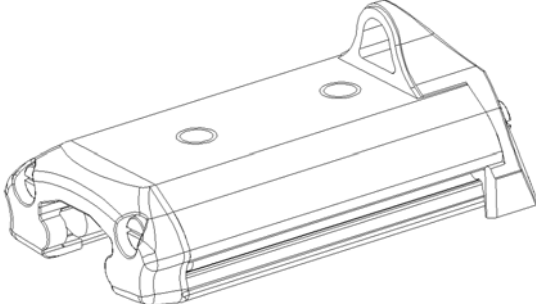
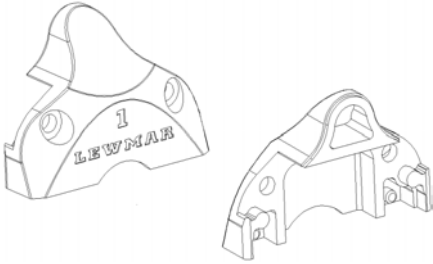
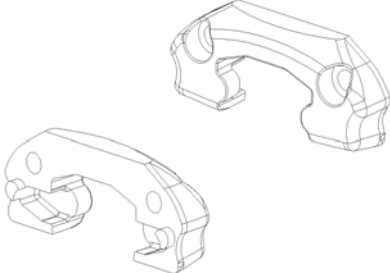
## TRAVELER RANGE BUILD BLOCKS

### CONTROL LINE PARTS & PLUNGER

<p><b>Control Line Becket Kit</b>            29471010 SZ1 BKT KIT PAIR            29472010 SZ2 BKT KIT PAIR            29473010 SZ3 ENDSTOP BKT PAD EYE+FIX</p> <p>Some size 3 uses size 2 part</p>	 <p style="text-align: center;">Size 1                      Size 2</p> <p style="text-align: center;">Size 3</p>
<p><b>Single Control Line Sheave</b>            29471011 SZ1 SINGLE CL KIT PAIR ENDSTOP            29472011 SZ2 SINGLE CL KIT PAIR ENDSTOP</p> <p>Size 3 uses Sz2 or a 60mm Racing Footblock            Plain bearings            Ball sheaves have yellow sides</p>	
<p><b>Double Control Line Sheave</b>            29471012 SZ1 DOUBLE CL KIT PAIR ENDSTOP            29472012 SZ2 DOUBLE CL KIT PAIR ENDSTOP</p> <p>Size 3 uses Sz2 or a 60mm Racing Footblock            Plain bearings            Ball sheaves have yellow sides</p>	
<p><b>Cleat Assembly For End Stop</b>            29471015 SZ1 CLEAT ASSY PAIR ENDSTOP            29472015 SZ2 CLEAT ASSY PAIR ENDSTOP</p> <p>Size 3 loads are too high for cleats. Use a clutch on the deck</p>	
<p><b>Cleat Assembly For Car</b>            28004144</p> <p>The current traveller range (NTR) uses different plates from the Ocean Traveller Range.            Size 3 loads are too high for cleats. Use a clutch on the deck</p>	
<p><b>Plunger Kits</b>            28003321 SZ1 PLUNGER KIT            28003459 SIZE 2 PLUNGER KIT</p> <p><b>Workshop fit only. Required swaging.</b></p>	

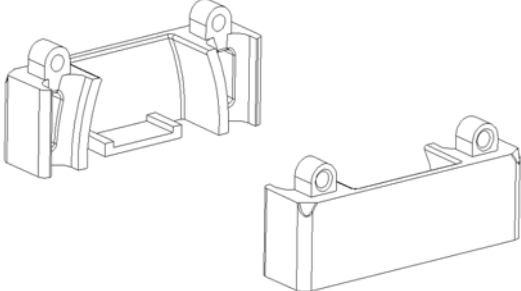
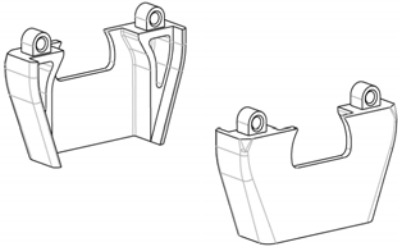
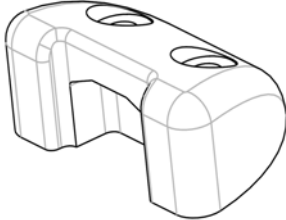
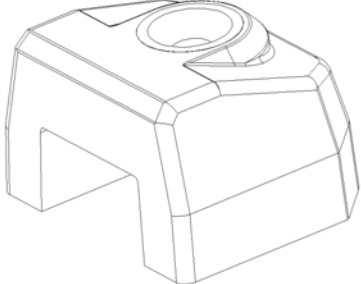
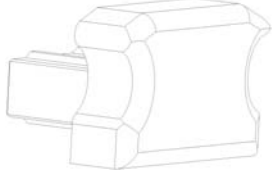
## TRAVELER RANGE BUILD BLOCKS

### CONTROL LINE END STOP PARTS

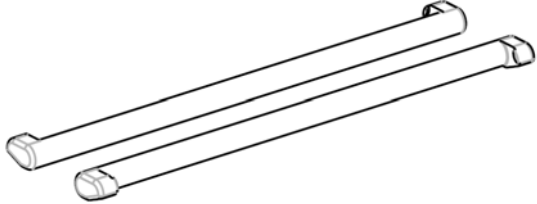
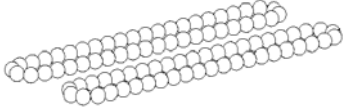
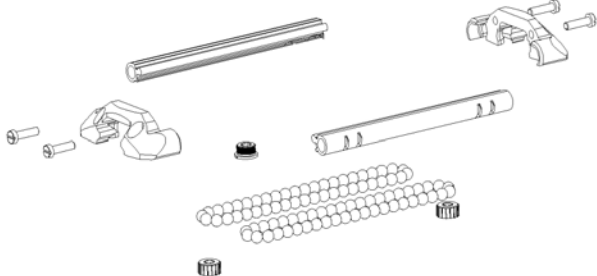
<p><b>Standard End Stop</b>  29471030    SZ1 CL ENDSTOP BASE  29472030    SZ2 CL ENDSTOP BASE  29473030    SZ3 IMPACT END STOP</p>	 <p style="text-align: center;">Size 1 &amp; 2</p> <p style="text-align: center;">Size 3</p>
<p>28004481  High Load Control Line End Stop</p> <p style="color: red;">What is the difference ?ID required</p>	
<p><b>End Stop Covers</b>  25002927    SZ1 END STOP COVER  25002988    SZ2 END STOP COVER  25003963</p>	
<p><b>End Stop Buffer</b>  25002915    SZ1 NTR BUFFER  25003440    SZ2 NTR BUFFER  25003894    SZ3 NTR BUFFER MKII</p>	

## TRAVELER RANGE BUILD BLOCKS

### SIMPLE END STOPS & TRACK COVERS

<p><b>Beam Track End Cover</b>  29471041 SZ1 BM TRK END COVER PAIR  29472041 SZ2 BM TRK END PAIR  29473041 SZ3 BM TRK END COVER</p>	
<p><b>HD Beam Track Cover</b>  29471042 SZ1 HD BM TRK COVER PAIR  29472042 SZ2 HD BM TRK COVER PAIR</p> <p>Size3 HD Beam Track does not exist</p>	
<p><b>Track End Stop</b>  29171040 SZ1 SIMPLE END STOP  29172040 SZ2 SIMPLE END STOP  29173040 SZ3 SIMPLE END STOP</p>	
<p><b>Impact End Stop</b>  29905105  SZ1 ONE PIECE IMPACT END STOP</p> <p>Does not exist for Sz 2 or Sz3</p>	
<p>29905114 SZ1 TRK PLUG  29905214 SZ2 TRK PLUG  29905314 SZ3 TRK PLUG  29905414 SZ4 TRK PLUG</p>	 <p style="text-align: center;">Rubber bung fits into end of track</p>

## TRAVELER RANGE BUILD BLOCKS – BEARINGS

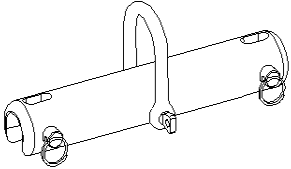
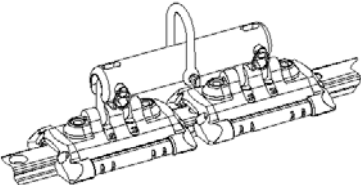
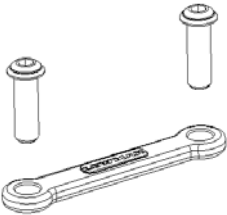
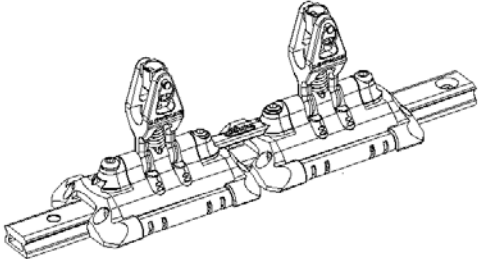
<p><b>Slide Rods</b>          The current traveller range (NTR) uses different slide rods from the Ocean Traveller Range.</p> <p>NTR slide rods are not created as spares</p>	
<p><b>Torlon Balls</b></p> <p>29171021    SZ1 TORLON BALL SPARES          29172021    SZ2 TORLON BALL SPARES          29173021    SZ3 TORLON BALL SPARES</p>	
<p><b>Slide Rod to Balls Conversion Kit</b></p> <p>29471027    SZ1 REC BALL CONVERSION KIT          29472027    SZ2 REC BALL CONVERSION KIT</p> <p>Sz3 conversion not possible.</p>	

## TRAVELER RANGE BUILD BLOCKS - MISC

<p><b>Joining Insert For Drilled Plunger Track</b></p> <p>29970029    SZ0 BOX TRACK JOIN INSERT          29971029    SZ1 BOX TRACK JOIN INSERT          29972029    SZ2 BOX TRACK JOIN INSERT          29973029    SZ3 BOX TRACK JOIN INSERT</p>	
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# TRAVELER RANGE BUILD BLOCKS

## LINKS FOR JOINING CARS

<p><b>Links For Short Cars – Short Car Links</b> 29471063 SZ1 SHORTCAR LINK 29472063 SZ2 SHORTCAR LINK</p>	<p>Parts in kit</p>  <p>Link fitted to cars</p> 
<p><b>Dog Bone Link</b> 29472064 SZ2 DOG BONE LINK</p> <p>Will fit any size 2 cars (Needs to be confirmed)</p>	<p>Parts in kit</p>  <p>Link fitted to cars</p> 



## TRAVELER RANGE BUILD BLOCKS

### FASTENING TABLE

<b>Size 1</b>	<b>Fixings For Car</b>	<b>Fixings For End Stop</b>
End Stop Base		M6x length depends on installation
Single Control Line		M6x35
Double Control Line		M6x53
Single Control Line, Becket		M6x35
Double Control Line, Becket		M6x53
Double Control Line, Becket, Cleat		M6x53
High Load End Stop With 40mm Sheave		M8x60
<b>Size 2</b>	<b>Fixings For Car</b>	<b>Fixings For End Stop</b>
End Stop Base		M8x35 + M8x20 (2 lengths required)
Single Control Line		M8x45
Double Control Line		M8x65
Single Control Line, Becket		M8x45
Double Control Line, Becket		M8x70
Single Control Line, Becket, Vertical		M8x50
Sheave		M8x70
Double Control Line, Ball Bearing		M12 (length depends on installation)
Sheave, Becket		M8x20
High Load Impact End Stop		M8x45
Mid Track End Stop		M8x70
Mid Track Single Control Line, Becket		M8x45
Double Control Line, Becket, Cleat		M8x70

# CAR UPSTAND TO BLOCK COMPATABILITY

## Lewmar - NTR Traveller Range - Car Upstand To Block Compatability

Last Up-date: 20-Aug-07

### Block Details

Block Type	Part Number	Block Size	Shackle Post Diameter (mm)	Shackle Post Diameter Tolerance (+/- mm)	Shackle Pin Diameter (mm)
Synchro	n/a	50mm	7.90	0.10	4
Synchro	n/a	60mm	9.43	0.05	5
Synchro	n/a	72mm	11.90	0.10	6
Synchro	n/a	90mm	16.50	0.10	9.8
Synchro	n/a	105mm	19.75	0.05	10
Control	n/a	30 Single	7.10	0.20	4
Control	n/a	30 Triple	9.25	0.25	5
Control	n/a	40 Single	8.00	0.05	4
Control	n/a	40 Triple	11.45	0.05	6
Control	n/a	60 single	9.50	0.10	5
Control	n/a	60 Double	9.90	0.10	6
Control	n/a	60 Triple	9.90	0.10	6
Racing		80mm LL Single	12.40	0.10	6
Racing		80mm LL Fiddle	12.40	0.10	6
Racing		80mm LL Double	14.00	0.20	8
Racing		80mm LL Triple	14.00	0.20	8
Racing	2994 1611	60mm HL single	11.10	0.10	6
Racing	2994 1612	60mm HL double	13.85	0.10	8
Racing	2994 1613	60mm HL triple	13.85	0.10	8
Racing	2994 1614	60mm HL single becket	11.10	0.10	6
Racing	2994 1615	60mm HL double becket	13.85	0.10	8
Racing	2994 1801	80mm HI single	15.00	0.20	8
Racing	2994 1802	80mm HI double	19.80	0.10	10
Racing	2994 1804	80mm HL single becket	15.00	0.20	8
Racing	2994 1805	80mm HL double becket	19.80	0.10	10
Racing	2994 1831	80mm HL Fiddle Block	15.00	0.20	8
Racing	2994 1834	80mm HL Fiddle & Becket	15.00	0.20	8
Racing	2994 1101	105mm HL single	19.80	0.10	10
Racing	2994 1102	105mm HL double	21.75	0.05	12
Racing	2994 1104	105mm HL single becket	19.80	0.10	10
Racing	2994 1131	130mm HL single	22.70	0.10	12
Racing	2994 1134	130mm HL single becket	22.70	0.10	12
Racing	2994 1151	155mm HL single	25.80	0.10	14
Racing	2994 1154	155mm HL single becket	25.80	0.10	14
Racing	2994 2606	60mm Runner shackle post	17.50	0.20	8
Racing	2994 2806	80mm Runner shackle post	23.75	0.20	10
Racing	2994 2106	105mm Runner shackle post	24.00	0.20	10
Racing	2994 2136	130mm Runner shackle post	28.00	0.20	12
Racing	2994 2156	155mm Runner shackle post	36.00	0.20	16

### Traveller Details

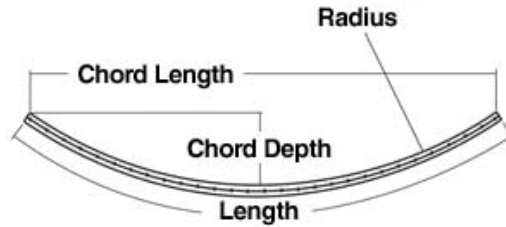
Traveller Range			Upstand Detail	
Ocean	Racing	NTR	Cup Diameter (mm)	Pin Diameter (mm)
0			-	-
1		1	9.5	5
	1		13	6
2		2	13	6
	2		21	10
3			16.5	10
	3		16.5	8
		3HL	24	12
		3VHL	21	10
		4	23	12
			tba	tba

NTR Upstand Conversion Kits	
29171024	SZ1 UPSTAND CONVERSION
29172024	SZ2 UPSTAND CONVERSION
29173024	SZ3 UPSTAND CONVERSION

# BENT TRACK

## BEND TYPES & MEASUREMENT

### Measurement



### Bend Types

<p><b>Horizontal</b> “round the mast” annotation HR.</p> <p>Often used for self tacking jibs on mainsheet tracks on multihulls.</p>	
<p><b>Vertical Concave</b> “ends up” annotation VC.</p> <p>Used for self tack in jibs and mainsheet tracks ensure the car moves to the end of the track as the control line is eased.</p>	
<p><b>Vertical Convex</b> “ends down” annotation VX.</p> <p>Used where the mainsheet track follows the curve of the deck. Not very efficient since the car will try to remain in the centre – but aesthetically pleasing</p>	

## BENT TRACK

### MINIMUM RADIUS FOR CARS

Car Length / Size	Short Car	Standard Car	Long Car
<b>Size 1</b>			
Car Length (mm)	107mm	162mm	n/a
Horizontal	3m	8m	n/a
Vertical	2m	4.5m	n/a
<b>Size 2</b>			
Car Length (mm)	140mm	210mm	307mm
Horizontal	3m	8m	12m
Vertical	4m	5m	12m
<b>Size 3 with 2.5T Upstands</b>			
Car Length (mm)	150mm	215mm	307mm
Horizontal	4m	10m	12m
Vertical	3m	5m	12m
<b>Size 3 Production Radius Cars</b> (HR = horizontal radius) (VR = vertical radius of either type)			
29333269	SZ3 CAR TB UPS HR 6-9M	6-9m HR	
29333246	SZ3 CAR TB UPS 2CL HR 4-6M	4-6m HR	
29333281	SZ3 CAR 2UPS HR 8-10M		8-10m HR
29333245	SZ3 CAR TB 2UPS 4CL VR8.22		7-9m VR
29333247	SZ3 CAR TB 3UPS 4CL VR8.2M		7-9m VR
29333248	SZ3 CAR TB 3UPS 2CL VR14M		14m VR

### BENT TRACK – AVALBILITY

Size	Type			
	Drilled Plunger	Sliding Blot	Beam Track	Heavy Duty Beam Track
0	No	n/a	n/a	n/a
1	Yes	Yes	Yes	No
2	Yes	Yes	Yes	YES
3	Yes	Yes	Yes	No
4	Yes		n/a	
2 DBR	Yes			
25mm T-Track	No	n/a	n/a	n/a
32mm T-Track	No	n/a	n/a	n/a