

TREMSAFE ROOFTOP SAFETY PACKAGE

Our TremSafe range of rooftop safety items have been carefully designed to provide a complete safety package for flat roof system installations. We offer a wide variety of freestanding balustrades (TremSafe Guardrail), cat ladders (TremSafe Access Ladder) and up and over service platforms (TremSafe Staircase) to accommodate the individual needs of any project.

This document is a guide to help understand the products required when choosing a preferred design and systems to overcome the various safety risks that can be presented on a flat roof.

TremSafe Guardrail

These free-standing handrails offer options that include straight, folding, half folding and curved. Standing at a minimum of 1100mm above the roof finish, the free-standing handrail provides collective protection against fall from heights. The non-penetrative base plate system with a high performance bonded ribbed rubber mat protects the roof damage.

Adjustability

The base plate and spigot provide up to 250mm of vertical adjustment making it adaptable for use on green roofs and tapered insulation schemes where the horizontal rail needs to be levelled or raised above green or ballasted roof finishes.

Straight Handrail

Dimensions	H: 1100mm (min) 1350mm (max), W: 150mm, L: 960mm D: 15mm
Counterweight	H: 1100mm (min), 1350mm (max) W: 150mm L: 1200mm D: 15mm
Weight	(Inc. Base, Leg, 2xCrossovers) 26kg
Material	Steel
Finish	Galvanised BS/EN 1416. Powder Coat (Specified RAL Number)

Half Folding Handrail



Full Folding Handrail
Double Base Mid Span at
4M Centres



Curved Handrail



Dimensions	H: Straight 1100mm, Folded 624mm W: 150mm, L: 960mm.	Dimensions	H: Straight 1100mm, Folded 624mm W: 150mm, L: 960mm.	Dimensions	H: Straight 1072mm, Folded 624mm W: 150mm, L: 960mm.
Weight	(Inc. Base, Top half of leg, 2xCrossovers. Adjustable sleeve)	Weight	(Inc. Base, Top half of leg, 2xCrossovers. Adjustable sleeve)	Weight	(Inc. Base, Top half of leg, 2xCrossovers. Adjustable sleeve)
Material	Steel	Material	Steel	Material	Steel
Finish	Galvanised BS/EN 1416. Powder Coat (Specified RAL Number)	Finish	Galvanise BS/EN 1416, Powder Coat, Available Over Galvanise	Finish	Galvanise BS/EN 1416, Powder Coat, Available Over Galvanised

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Fittings

All fittings have a 48mm inside diameter, are die-cast, and come with stainless steel grub screws for tightening.



Adjustable Knuckle 166
Weight: 1.44kg



Sleeve 149
Weight: 0.59



Short Tee 101
Weight: 0.55kg



Elbow 125
Weight: 0.7kg



Long Tee 104
Weight: 1.05kg



Two Socket Cross Over 119
Weight: 0.79kg



Wall Plate 131
Weight: 0.92kg



Heavy Duty Side Support 245
Weight: 1.32kg



Retro Fit Clamp 135
Weight:



Horizontal Railing Base
Weight: 1.23kg



Horizontal Railing Base
Weight: 1.32kg



Cross over 161
Weight: 0.57kg

Polyester Powder Coat Finish

All guardrail products can be finished in polyester powder coat (PPC) to a specific RAL colour. The PPC is sprayed directly to the galvanised finish to help protect the steel and offer an aesthetically pleasing finish. Installation or general damage can be made good with RAL specific touch up brushes.

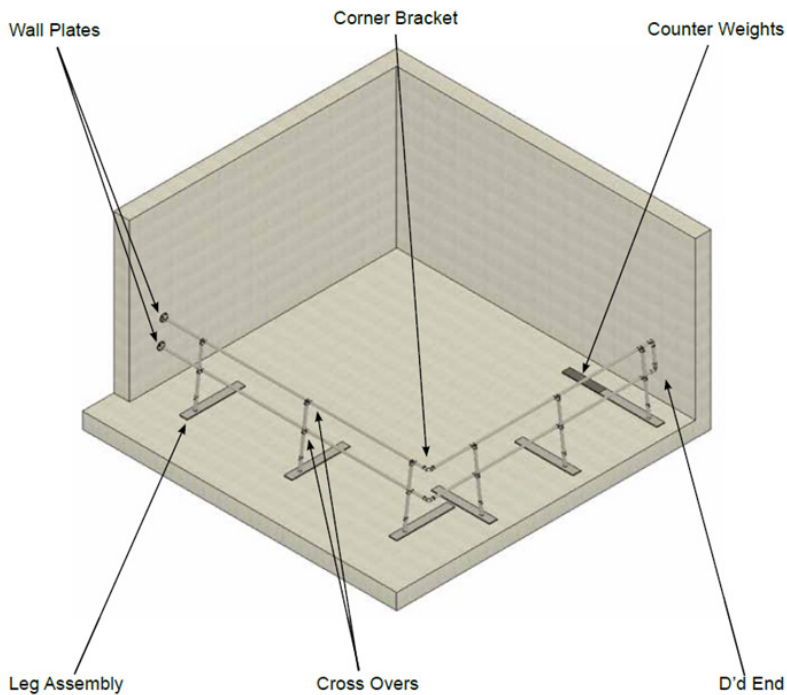
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Typical Layout Options

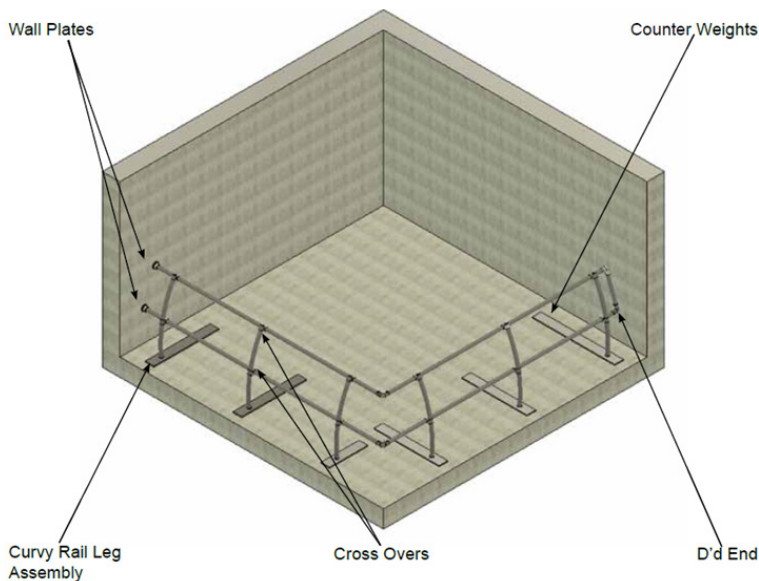
Freestanding guardrails are spaced at two meters to provide the strength needed to meet the old standard HSE/SR 1984 which exceeds the new standard of today.

Freestanding guardrails are ideally fixed to a wall surface using wall plates but where this is not possible counterweights can be used at either end to securely hold the freestanding guardrail on the roof.

Straight:



Curved:

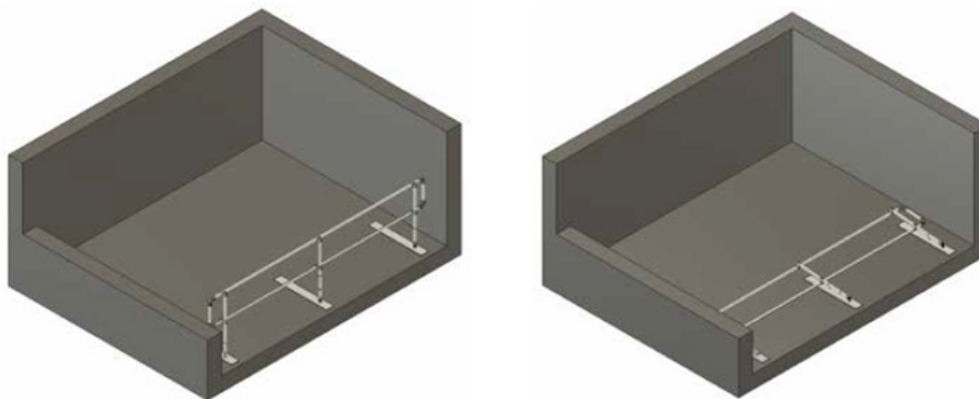


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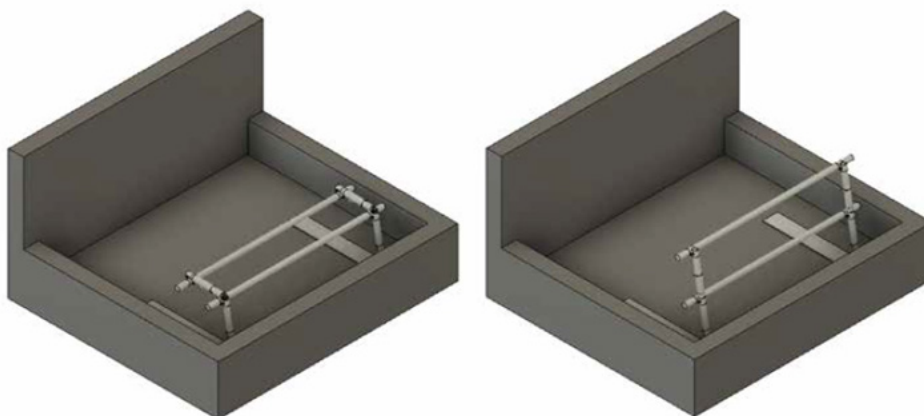


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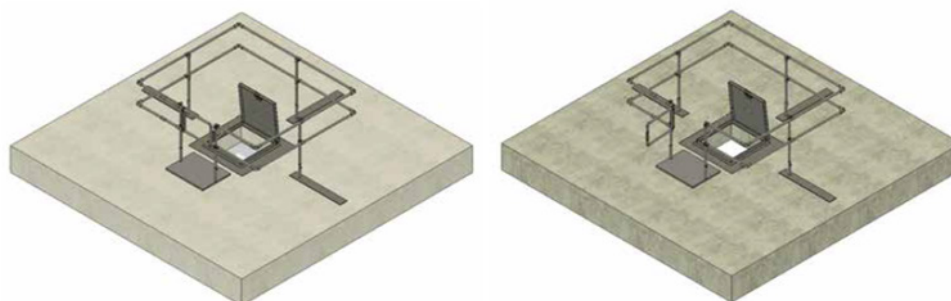
Fully folding:



Half folding:



Access protection with self-closing gate:



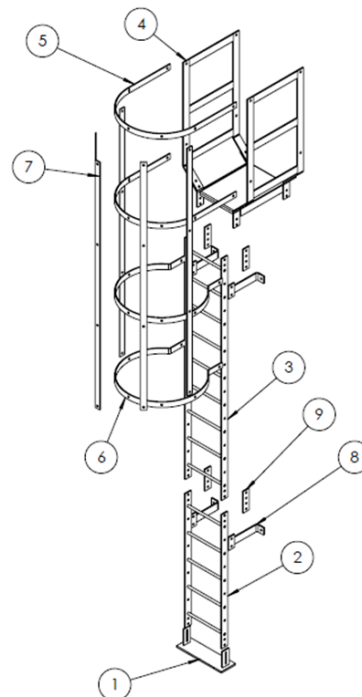
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TremSAFE Access Ladder

Steel galvanised cat ladders are a permanent method of roof access, made from galvanised steel they are designed to withstand all outdoor weather. With individual spans of ladder sections, a cat ladder solution can easily be created to suit the need and dimensions of the buildings.

Cat ladder breakdown

Item	Part No	Product Reference	Quantity	Kg
1	BTL Spreader 1	Ladder Spreader Plate	2	9.82
2	BTL/1245	BT Ladder 1245mm	1	16.88
3	BTL/2245	BT Ladder 2245mm	1	30.50
4	BT Landing 3	Ladder Landing 600	2	57.25
5	BT Hoop/1	Top Hoop	2	6.14
6	BT Hoop/2	Bottom Hoop 5 Straps	2	6.44
7	BT/Strap	Ladder Strap	5	7.13
8	BT LT/1	BT Ladder Tie	4	2.15
9	LADDER/JP	Ladder Joining Plate	4	0.95
10	BT Landing 2	Ladder Landing 800	1	68.08
11	BT Landing 4	Ladder Landing 1200	1	89.74
12	BT Landing 5	Ladder Hatch Landing 220	1	8.56



Ships Ladders or Companionway Ladders

Used in place of a standard ladder or staircase where the angle of the ladder is between 60-75%. The ships ladder is made bespoke for each project.



Ladder Shields

Put in place to prevent unauthorised access up cat ladders, the galvanised steel sheet is locked using a padlock at the base of the ladder. Once unlocked the ladder can be accessed as usual.



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Ladder Boxes

Used to store ladders up to a height of 2.5M while they are not in use. Internal security bar allowing ladders to be padlocked as well as locked within the ladder box. Galvanised to BS/EN 1461 1999 and then finished with powder coat.



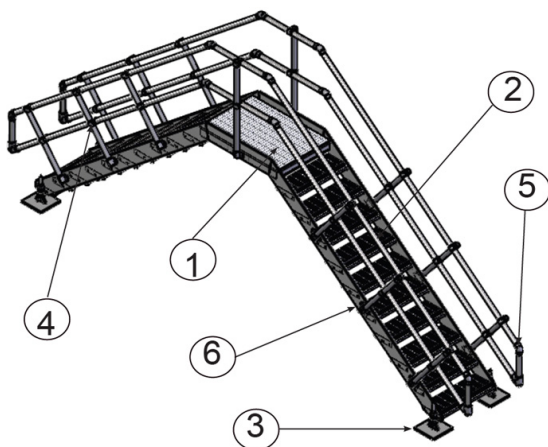
Tremsafe Staircase

Designed, manufactured and calculated to suit the need of each individual purpose, our up & over staircases allow for easy access across roofs. Made from galvanised mild steel with 10mm stringers they can be utilised for any roof. Balustraded with key clamp to a minimum height of 1100mm to provide safety while crossing over the walkways, each step can be marked with yellow safety paint to make it visible to the user.

Adjustable feet allow the up and over staircases to be placed on almost any roof while still staying level and securely in place. Each foot can be adjusted separately to suit the pitch and height of the roof using the levelling system.



Staircase breakdown:



Item	Part No.	Product Reference	Qty in view
1	L1	Landing Platform	1
2	T1	Stair Treads	16
3	F1	Adjustable Feet	4
4	161	Cross Over 161	28
5	123	Variable Elbow 123	16
6	145	Horizontal Base 145	14

Testing & Accreditation

The TremSafe Guardrail systems were first designed, manufactured and tested in 1999 to the then standard of HSE/SR September 1984 (HSE/SR,1984) requiring loads of 0.74kN. The system is still manufactured and installed to the old standard - (HSE/SR,1984) but also complies with and exceeds the newer standards EN13374 class A and EN13700.

The minimum load requirement of EN13374 class A and EN13700 is 34kN that is widely accepted as the minimum standard. EN13374 class A states that the system should at least withstand "People leaning against it". However, we feel this level of resistance is inadequate for leading edge protection, hence we have designed our system to the older and higher performing standard of HSE/SR.