



TSS Company Activity

TSS are market leaders in the working at height and fall safety systems within a multi discipline industry. Since its inception, TSS has grown organically, predominantly through referral and customer satisfaction which is a testament to the high standards we work to and our dedication to our customers. Within the business we have over 50 years experience in the Fall Safety Systems.

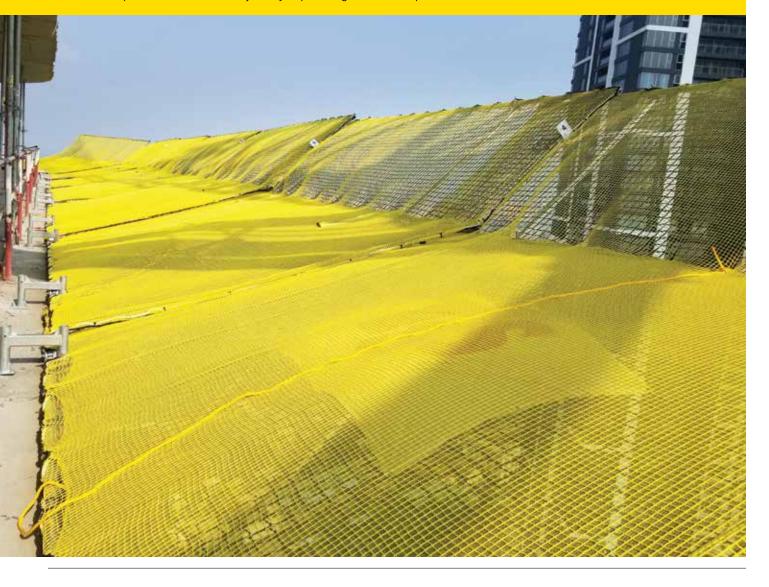
TSS have a unique offering of Sale, Rental and Contract supply of Fall Prevention (Temporary Edge Protection systems, guard Railing), Fall Protection (Safety Netting, Safety Net Fans), Fall Arrest and PPE systems for Construction, Industrial, Infrastructure and Oil & Gas sector within the MENA region.

We have an extensive Industry approved Training Programs for Height Safety activities.

At **TSS** our company philosophy is aimed at providing the full range of Fall Safety solutions and services to our customers with integral safety and quality in mind. We are leading this field by providing Fall Safety products for Sale and Rental backed up with Technical, Training, Rigging and maintenance support services.

We pride ourselves with having an in-depth industry and market knowledge and understanding the need of our customers.

Our tremendous growth in such short space of time shows our customer's confidence in our products and services providing us with the inspiration to continue our journey in providing a safer workplace for our customers.





TSS Safety Net Fans

Total Safety Solutions has developed the TS Fan as a result of a comprehensive study of the problems associated with the falling of objects and workers as well as risks of falling objects for the workers or members of public.

Unlike similar products on the market the TS Fan has the unique ability to adapt to various building shapes and façade materials, as well as coping with high wind loading, particularly in high-rise and exposed structures.



TSS Safety Net Fans Safety Warnings

It is imperative that TS Fans are installed by competent and trained personnel. TSS offers on-site product training to ensure safe and correct use of products.

The Fans must be installed by a competent person; training is strongly recommended.

All TS Fan components must be inspected by a competent person prior to re-use. A record inspection of the annual testing of Safety Nets must be kept by the customer.

Following the fall of an object or person in the Fans, the units must be inspected by a competent person prior to re-use.

Personnel involved in the assembly and installation of the Fans must be trained and competent on working at height and equipped with necessary PPE.

















TSS Fan Positioning limits according to EN 1263-2

The positioning limits stated in EN 1263-2 for Safety Fans are intended for the purpose of arresting the fall of a person from height.

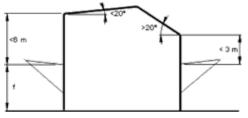
In accordance with EN1263-2 Safety nets: Part 2: Safety requirements for the positioning limits, Safety Fans designed to arrest the fall of a person should be positioned as follows:

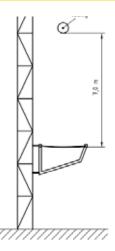
For surfaces sloping less than 20°, the maximum falling height must not exceed 6m. For surfaces sloping more than 20°, the maximum falling height must not exceed 3m.

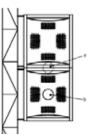
It is however recommended to install the TSS Fans as close to the risk area as possible to minimise the falling height and the subsequent injury to falling person.

Distance (f) below the TSS Fan unit should not be less the overall height of the Fan unit. No object must obstruct the bottom of the TSS Fan to ensure undisturbed arrest of fall.











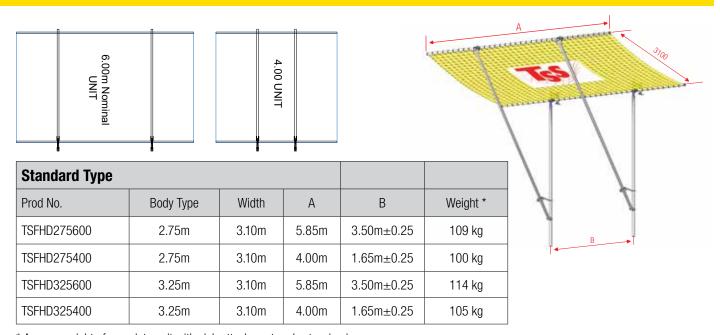
TSS Safety Net Fans Type - Standard type - Extra Wide type

Select required fan width (Standard type or Extra-wide type).

Manufactured fully compliant with European Standard EN-1263-2 Type T, using 60x60 and 20x20 layered nets, capable of arresting a 100kg mass **Twice** on any part of the system from a 7m (Approx. 2 floors) drop height.

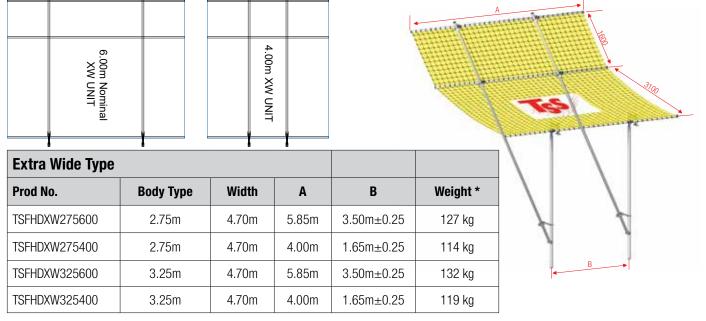
Application: Arresting the fall of a worker as well as catching of light material and Debris

Standard type



^{*} Approx. weight of complete unit with slab attachment and extension leg.

Extra Wide type



^{*} Approx. weight of complete unit with slab attachment and extension leg.

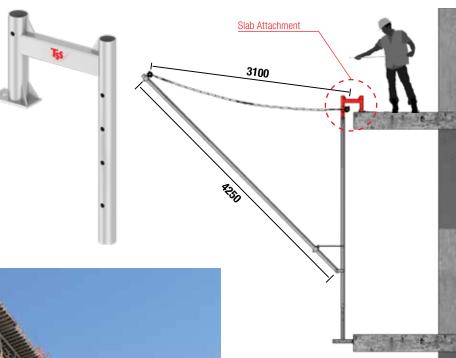


Slab Attachment Application

Used to mount TSS Fan on top of cast concrete slab. Drill 12.00mm Ø hole to accommodate M12 Anchor Bolt, respectively. Socket tube enables connection of edge protection to TSS Fan unit.

Note: Use M12x120 Anchor bolt to connect attachment to the slab.

Description	TSFSLATG
Article No.	Slab Attachment
Weight	5.20 kg



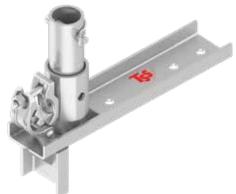




Slab Attachment Adjustable Application

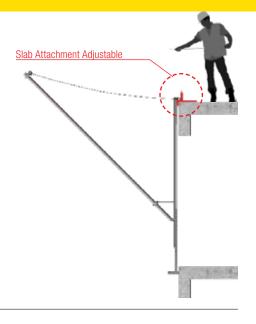
Enables anchor connection of the TSS Fan to slabs whilst allowing block work or similar operation on the slab edge. Slab Attachment Adjustable can be installed ahead of the Fan installation enabling speedy erection.

Note: Use M12x120 Anchor bolt to connect attachment to the slab.



Description	TSFSLATADJ
Article No.	Slab attachment adjustable
Weight	3.31 kg







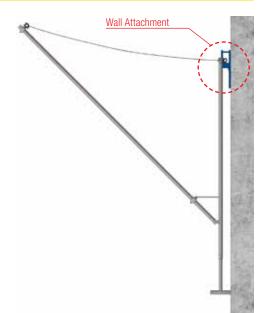
Wall Attachment Application

Enables anchor connection of the TSS Fan to walls and vertical surfaces. Key hole enables pre-drilling for anchors. Locking bolt ensures secure positioning of the Fan.

Note: Use M12x120 Anchor bolt to connect attachment to the slab.

Description	TSFWAAT
Article No.	Wall attachment
Weight	2.86 kg









Slab Attachment Flat Application

Enables anchor connection of the TSS Fan to slabs whilst allowing block work or similar operation on the slab edge. Slab Attachment Flat can be installed ahead of the Fan installation enabling speedy erection. Locking bolt ensures secure positioning of the Fan.

Note: Use M12x120 Anchor bolt to connect attachment to the slab.

Description	TSFFLAT
Article No.	Slab attachment flat
Weight	3.08 kg





Scaffold Attachment Application

Used to connect the TSS Fan to scaffold and shoring structures. Connection must be made to the vertical members and user must ensure that loading imposed on the scaffold structure are designed and catered for.

Description	TSFSCAT
Article No.	Scaffold attachment
Weight	3.96 kg

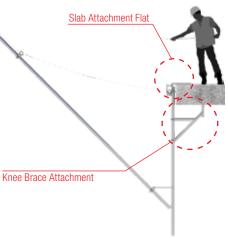




Knee Brace Attachment Application

Used to connect the TSS Fan to scaffold and shoring structures. Connection must be made to the vertical members and user must ensure that loading imposed on the scaffold structure are designed and catered for.





Description	Knee brace	Supporting shoe
Article No.	TSFKBATP	TSFSUHHDG
Weight	7.90 kg	1.26







Girder Jaw Clamp Application



Enables anchor connection of the TSS Fan to walls and vertical surfaces. Key hole enables pre-drilling for anchors.

Locking bolt ensures secure positioning of the Fan.

Note: Use M12x120 Anchor bolt to connect attachment to the slab.

Description	Girder Jaw Clamp UB 350	Girder Jaw Clamp UB 600	Girder Jaw	90 degree connector
Article No.	TSSEPGJC350	TSSEPGJC600		TSSGJC90DEG
Weight	6.28 kg	6.90 kg	1.66 kg	1.00 kg

TSS Coupler & Wind Lock



Description	Double coupler 48/60mm	Double coupler 48/48mm	Wind lock
Article No.	TSFDBLCP	TSFDBLC48	TSWILKP
Weight	1.10 kg	0.98 kg	1.68













TSS Extension Leg

Provides a telescopic extension to TS Fan to provide support from the floor below. Extension legs are available in Short and Long versions to satisfy floor-to-floor height variation with economy in mind. Support Shoe provides a better bearing on the edge of the slab and also enables anchor connection of the TS Fan to the slab below. An Extender Arm facilitates slab floor offsets such as balcony areas.

Description	Article No.	Weight
Extension Leg, Short	TSFEXSLG	4.14 kg
Extension Leg, Long	TSFEXLLG	6.82 kg
Support Shoe	TSFSUHHDG	1.26 kg
Extender Arm	TSFEXAR	1.05 kg



Extension Leg Type					
Body Type	Short		Long		
	Min.	Max.	Min.	Max.	
Body 2.75	2.60m	3.10m	2.60m	3.75m	
Body 3.25	3.10m	3.60m	3.10m	4.25m	

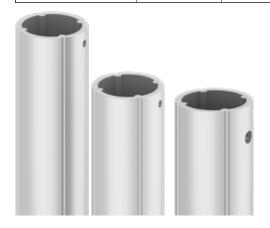


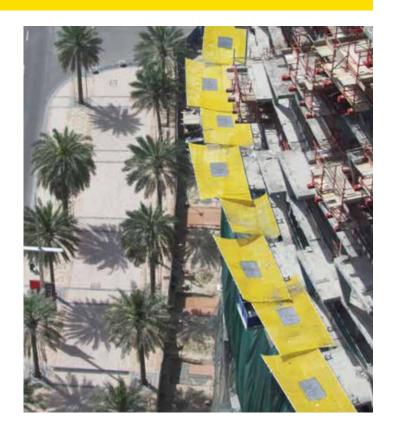


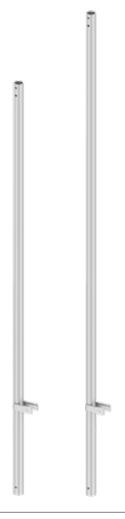


TSS Body & Tube

Description	Article No.	Weight
Body 3.25m	TSFBDYG3.25	18.48 kg
Body 2.75m	TSFBDYG2.75	16.18 kg
Horizontal Tube 5.85m	TSFH0T585	8.46 kg
Horizontal Tube 4.00m	TSFH0T400	5.84 kg
Diagonal Tube 4.25m	TSFDIA425	7.18 kg
Diagonal tube extender	TSFDIAGEXT	2.89 kg
Dia. Tube Make-up 2.00m	TSFDIAMKUP	2.80 kg





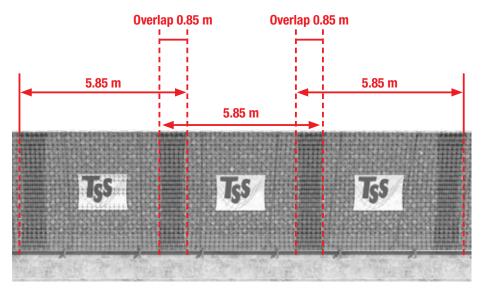






Overlap in Safety Net Fans

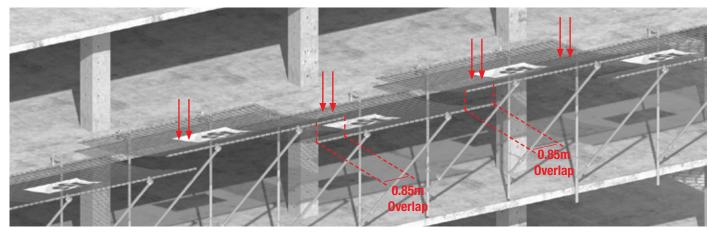
To ensure total coverage of gaps between TSS Fan units, the Fans must either be laced together or overlapped. Using the customary method of overlap, the lower units must be installed prior to upper units as indicated in the sketch below. This method of overlap allows for easy access when folding units for crane-age. The overlapping is achieved automatically using the adjustable coupler when used in conjunction with Slab attachments. When using other attachments (Wall or Slab attachments Flat), the Fan units are simply stack on top of one another.





The extent of overlap between TSS Fan units determines the effective length of unit on plan. To maintain the minimum overlap of 0.75m between TSS Fan units as required by EN-1263, it is recommended to overlap the units at 0.85m as the nets are narrower in the middle.

Using 6.00m TSS Fan units with the overlap of 0.85m results in a 5.00m effective length and using a 4.00m TSS Fan units with the overlap of 0.85m results in a 3.15m effective length, with the exception of the first unit.

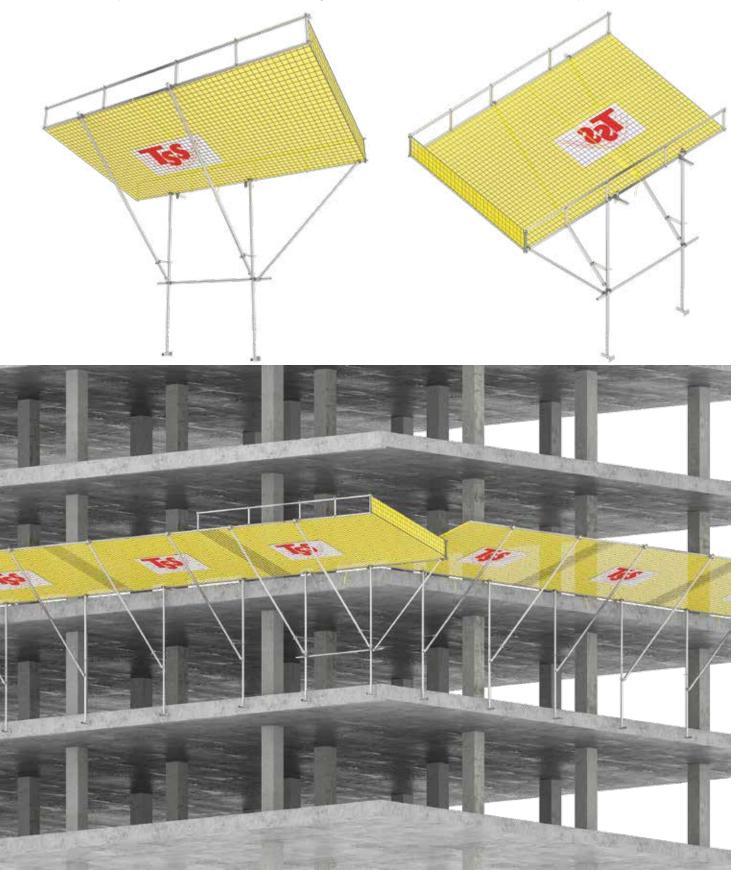






TSS Corner Unit - EN Compliant

Provides further protection on the corners of the building. TSS Corner Unit is to be used with 6m units only.



TSS Corner Unit kit (Non EN Compliant)

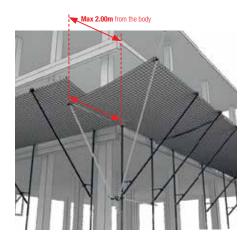
Corner units provide a full closure of the corner area of any building/structure. The Corner Unit is fixed on the Standard Fan. For cantilevers bigger than 1.50m a corner unit kit needs to be considered. The max. cantilever for a corner unit is 2.00m.

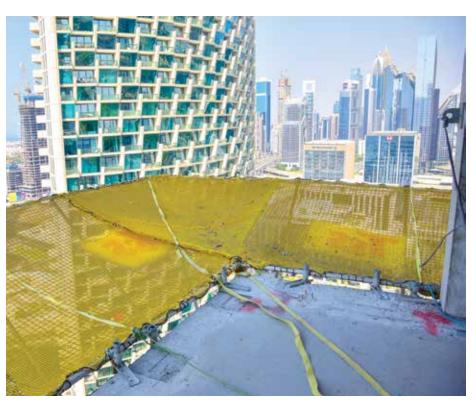
Note: Corner Unit Kits are designed for catching light material only. Corner Unit Kits can be used with 6.00m Safety Net Fans only.

Corner Unit kits do not comply with EN1263.









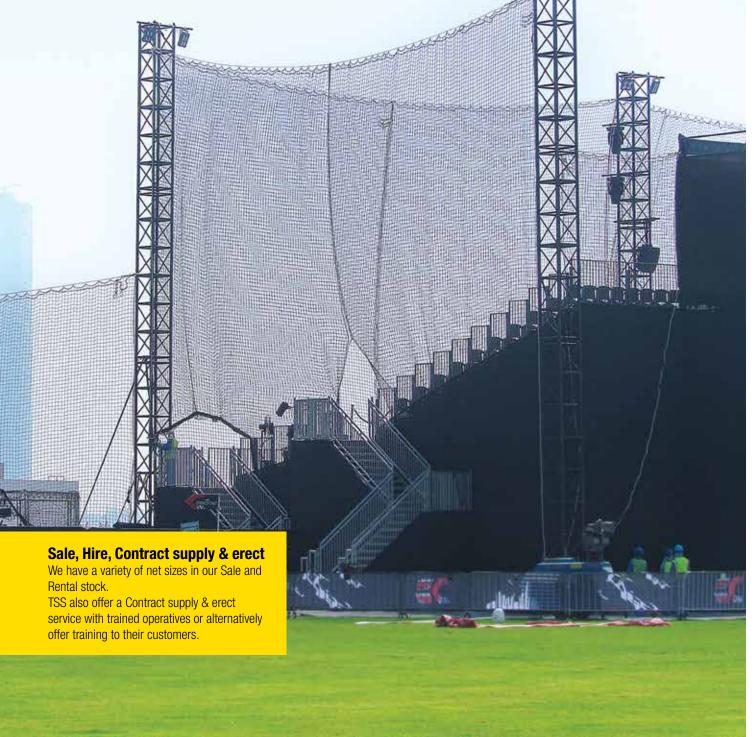




TSS Safety Nets

Safety nets protect workers on site by minimising the distance of fall as well as absorbing the energy of falls. They prevent fatalities and serious accidents when working at height whilst providing freedom of movement and collective protection for the workers above as well as providing protection against falling objects for workers below. In the majority of situations safety nets have advantages over other forms of fall arrest. Most Health & Safety Executives and Authorities regard nets as their "preferred method of fall arrest when working at height".

Our safety nets comply with stringent European regulations and are annually tested in laboratories to ensure their compliance.





For an effective Safety Net system 3 vital points must be ensured:

1- Safety Net compliance with EN 1263-1

- Minimum strength of rope edge 30kN
- Mesh size 45mm, 60mm or 100mm
- Minimum energy absorption 4.14kj

We use the best quality nets to provide you and your workers with peace of mind.



2- Safety Net rigging carried out by trained competent workers.

All our riggers are trained to install to BS EN 1263-2. TSS has set itself apart from its competitors by ensuring the quality and training of its workforce. TSS riggers are trained by FASET and have their own dedicated training centre. FASET is the trade association and training body for safety netting. FASET sets the standards for the supply, training and installation of safety nets in the UK and beyond.



3- Safety Net equipment systematically maintained.

A detailed inspection is carried out on each net before and after each use and any repairs carried out are logged. Details include:

- CERTIFICATE OF CONFORMITY
- DATE OF MANUFACTURE
- ANNUAL TEST RESULTS
- SUMMARY OF DAMAGE REPAIRS CARRIED OUT
- HISTORICAL HIRE DATA FOR EVERY NET





Dynamic load testing of Safety Nets.



Chemical Testing



Laboratory Testing of Ropes and Net cords



General Information:

All the safety nets supplied by **TSS** comply to **"EN1263-1 Safety Netting"** sourced from major Certified European manufacturers.

The European **UNE-EN 1263-1** Standard was approved by the said committee in 1997, which establishes the minimum requirements with which all Safety Netting must comply within the European Union and other territories belonging to the GEN.



The **UNE-EN 1263-1** establishes four systems of Safety Netting according to the use which is to be made of them:

Type S: Safety Net with border rope and dimensions of over 35 square metres, the smallest side being over 5 Metres, for horizontal use In industrial warehouses, bridges and special works,

Type V: Safety Net with border rope fastened to a gallows-type support.

Type T: Safety Net fastened to consoles for horizontal use (Safety Net Fans).

Type U: Safety Net fastened to a support structure for vertical use (Vertical Safety Nets and Edge Protection).

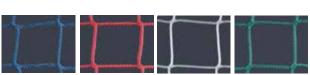
Systems Safety Nets - General Characteristics

Application: Safety nets with border ropes with an area exceeding 35m2, the smallest side being over 5 m in length, used for horizontal use in industrial warehouses, bridges, and overhead roof work.

Class: A2 with mesh dimension of 100x100 cord thickness 5mm. Manufactured in high tenacity polypropylene with UV treatment to resist sun damage.

Border Rope: weaved through the perimeter of the nets and tested to the requirement of EN1263-1.

Minimum break load is 30KN.











Auxiliary Components

Tying Rope: used to attach the net to the structure. Minimum Break load: 30KN or 15KN (double strand)

Tension Cables: Used when connection to structure is not possible.

Minimum Break load: 50KN

Karabiners: Used as connectors of Net to Tension Cables.

Minimum Break load: 20KN



The Lion-Hook is designed to make the installation of safety nets quicker and easier and safer in Portal framed buildings, Mezzanine Floors, Metal Decking and further I beam steel applications.







Work Positioning Nets (WPN) - General Characteristics

WPN systems are a cost effective alternative to traditional access systems (scaffold), used to gain access to various structures.

Application: The WPN system is a modular work positioning platform which can be modified according to its application and the work to be carried out. The system is an engineered system taking full consideration of both the structure from which the WPN will be supported and the loading placed upon the system during operation.

 $\textbf{Class:} \ \, \text{B4 with mesh dimension of } 45\text{x}45 \ \text{or } 60\text{x}60 \ \text{with cord thickness } 5\text{mm and } 20\text{x}20 \ \text{cord thickness } 3\text{mm stitched together.}$

Manufactured in high tenacity polypropylene withUV treatment to resist sun damage.

Border Rope: weaved through the perimeter of the nets and tested to the requirement of EN1263-1.

Minimum break load is 30KN.

Tension Straps: Wire or Webbing type with tensioning capability used to reduce sagging on WP Nets.

Karabiners: Used to connect perimeter tensioned wire to WP Nets.











Ropes - General Characteristics

Application: Prevention of Falls from height

Class: UNE EN 1891

Material: High Tenacity Polyamide.

Diameter: 11mm









Tying Ropes					
Description	REF	Article No.	Material Configuration	Length	Diameter
Tying Rope EN1263-1, 30KN	70733	TSRNR14210	Polyamide	Twisted 100	12
Tying Rope EN1263-1, 15KN	70734	TSTYROPE15KN100M	Polypropylene	Twisted 100	10
Tying Rope EN1263-1, 20KN	70735	TSTYROPE20KN100M	Polypropylenev	Twisted 100	12
Joining Rope EN1263-1, 7.5KN	70746	TSTYROPE7.5KN100M	Polyamide	Braided 100	7
Life Rope	70711	TSLIFEROPE	Polyamide	Braided 100	11













TSS Vertical Nets

TSS (Total Safety Solutions) supplies and installs **Vertical nets** in line with the requirements of EN 13374, the European standard for Temporary Edge Protection.

Nets are manufactured to EN 1263-1 and the application of such nets used vertically is covered in the standard as System U.

Material	Mesh size	Cord Thickness	Colour
High Tenacity Polypropylene	100 x 100 mm	5.00 mm	Black with blue flack













TSS Vertical Net is supplied with a second layer of Debris Net to prevent fall of small object and in particular splatters from cement and plaster work.

Each unit is supplied with an integral high grade Profiled Aluminium Tube at every floor location and is attached to the slab using a Loose Attachment which retains the tubes and is designed to be used with blockwork in mind.

Multi-level Nets can be relocated in one lift saving crane time and avoiding site delays.



At TSS (Total Safety solutions), we have the product range and the experience to:

- Provide a number of suitable Safety Net options for specific applications.
- Provide advice and training on the Netting design and installation, to optimise your site's operational efficiency.
- New options in Design: Combined Safety Net and Vertical Net (Vertifan) providing protection for formwork as well as slab edge operation.



Safety Warnings:

It is imperative that TS Nets are installed by competent and trained personnel. TSS offers on-site product training to ensure safe and correct use of products. All TS Net components must be inspected by a competent person prior to re-use. A record inspection of the annual testing of Safety Nets must be kept by the customer.



Component list:

Description	Article No.
Safety Net 100x100 mesh size	TSNET
Debris Net	TSDEB
Horizontal Alumin. Profile Tube	TSFHOT

2 Floors	4.0 m 6.0 m 7.0 m 9.0 m	7.5 m
3 Floors	4.0 m 6.0 m 7.0 m 9.0 m	11.5 m
4 Floors	4.0 m 6.0 m 7.0 m 9.0 m	15 m

Width

Length





TSS Vented Sheeting

Construction companies ranging from national contractors to Project Developers along with event Organizers and suppliers are increasingly seizing the advertising opportunity offered through the use of logo and image printing on scaffold sheeting, fence panels and banners. TSS sheeting is a leading range of weather protection and containment material and can be printed flexographically or wide-format digitally for effective corporate branding or prominent publicity campaigns. Printed sheeting has become a successful and economical marketing tool which optimizes the advertising opportunity for the duration of any building works or event.







TSS Vented Sheeting / Perimeter Mesh Fencing

A more open weave than solid sheeting, TSS Vented Sheeting provides higher air permeability. It is used to dry out interior works and disperse paint solvents and air pressure during stone cleaning or shot-blasting. It is also suitable as perimeter mesh fencing as it reduces wind forces on the fence. Also available in black for outdoor events and can be printed for corporate branding.



		Perimeter Mesh Fencing			
Description	Compliance	Flame Retardant	Colour	Custom Printing	Sizes
TSS Vented Sheeting Flame Retardant	BS7955	BS476 part 12C (complies with LPS 1215 sect 3.1.1)	Black, White	Yes	1.76m x 50m, 2m x 45m
TSS Vented Sheeting	BS7955	N/A	White	Yes	2m x 45m

TSS Debris Netting

Improves site safety by reducing risk of debris and small tools from falling outside of the scaffold. Also offers limited weather protection & reduces heat and dust disruption.





Debris Netting					
Description	Compliance	Flame Retardant	Colour	Custom Printing	Sizes
TSS Debris Netting Flame Retardant	-	Complies with LPS 1215 Sec 3.1.3	White	No	2m x 50m, 3m x 50m
TSS Debris Netting	-	N/A	Black, Blue, Green, Orange, Red, Yellow	No	2m x 50m, 3m x 50m, 3.25m x 100m, 3.7 x 100m



Product Range	Flame Retardant	Description Min.	
TSS Vented Sheeting TSS Vented Sheeting FR	BS476 part 12C (complies with LPS1215 sect.3.1.1)	High air permeability for drying out works and dispersing fumes and air pressure. Suitable for perimeter netting as it reduces wind forces on the fence.	
TSS Vented Sheeting	N/A	Also available in black for outdoor events.	
TSS Scaffold Sheeting	LPCB 65 SUP GATHA WIS	Reinforced sheeting with eyelets at regular intervals along strong	
TSS FR Premium	LPS1215 Cert. 965b	reinforcement strips. Flame retardant grades are recommended for	
TSS FR Standard	LPS1215 Cert. 965b LPS1207 Cert. 965a	safetycritical installations such as occupied buildings, shipyards, petrochemical	
TSS Standard	N/A	and off shore installations.	
TSS Acoustic Sheeting TSS Acoustic FR	EN13501-1 Class E	Measurable noise reduction minimises environmental impact close to noise sensitive sites. The sheeting features a special sound absorbing foam which provides both thermal insulation and sound absorption. Also available for perimeter fence panels.	
TSS Insulated Sheeting TSS Insulated Sheeting FR	DIN 4102 B1	Incorporates cellular air cells which provide thermal insulation for improved working environments and those which require controlled	
TSS Insulated Sheeting	N/A	atmospheres. Widely used on project where low temperatures and inclement weather conditions prevail.	
TSS Keder Sheeting	BS7837 DIN4102	Keder sheeting for modular temporary roof systems is manufactured using	
TSS Keder 2000 FR	B1 CSFM M2	full width seamless material to provide maximum tensile strength. The	
TSS Keder 1215FR	LPS1215 Cert. 965b (PCB) BS476 part 12C	sheeting is reinforced and coated on both sides to provide a waterproof sheet, and both Keder 1215FR and	
TSS Keder 1100	N/A	1100 grades offer exceptional light transmission.	











Flame Retardant Standards

Flame retardant sheeting to internationally recognised European and British standards are particularly recommended for

safetycritical installations including marine and offshore, petrochemical installations and occupied buildings.



Sheeting that meets the Loss Prevention Standard LPS1207 or LPS1215 must have the relevant LPCB marking and certificate number printed on the material.



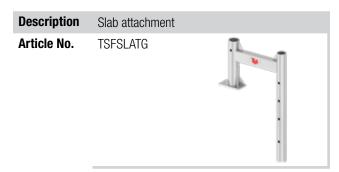




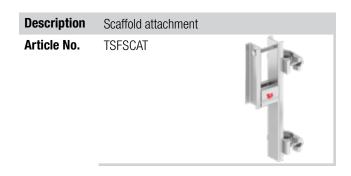
System Overview



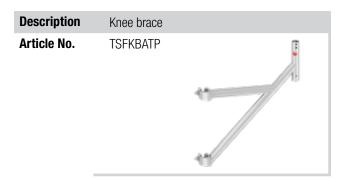








Description	Assembly stool	
Article No.	TSFASSTL	





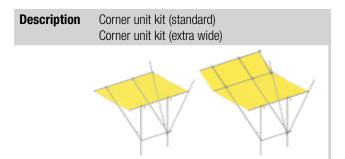




Description	TSS Logo	
Article No.	TSSBANNER	TSS









Description	Coupler adjustable	
Article No.	TSFADJCPP	

Description	Extension leg 0.75m	Extension leg 1.50m
Article No.	TSFEXSLG	TSFEXLLG

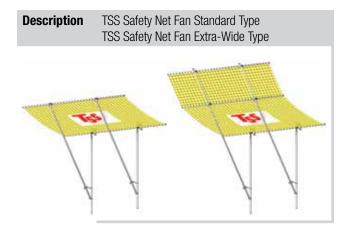
Description	Body 2.75m	Body 3.25m
Article No.	TSFBDYG2.75	TSFBDYG3.25

Description	Girder Jaw Clamp 350	Girder Jaw Clamp 600
Article No.	TSSEPGJC350	TSSEPGJC600

Description	Diagonal tube 4.25m	
Article No.	TSFDIA425	

Description	Horizontal tube 4.00m	Horizontal tube 5.85m	Diagonal tube extension
Article No.	TSFH0T400	TSFH0T585	TSFDIAGEXT

Description	Anchor bolt M12x120
Article No.	TSSANBM12x120
One time use only!	





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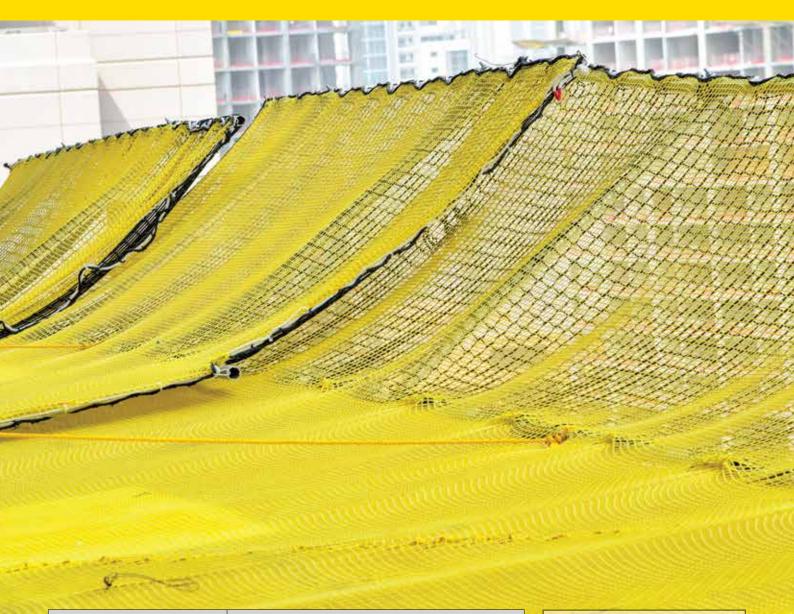
www.tss-me.com











TSS Safety Solutions	Products
TSS Fall Protection Systems	Safety Net Fans Safety Nets Sport and Leisure Vertifan Protection Screen Alsipercha fall arrest system
TSS Edge Protection Systems	Meshguard I Shaftgate I Coreguard I Ladstair
TSS Load Handling System	Flexideck Cantilever Loading Platform
TSS Lifeline Systems & PPE	Permanent Lifeline System I Temporary Lifeline System I Personal Protective Equipment I Rescue Devices & Equipment
TSS Garbage Chute System	Rubbish Chutes System
TSS Roof Safety Systems	Skylight Protection I Roof Walkway System I Walkway Mat
TSS Formwork System	Plastic (ABS) Formwork System for construction

