Warehouse partitioning.

Mesh panels for industrial applications.

TROAX®

Contents

Troax is a global developer and manufacturer of steel mesh panels for machine guarding, warehouse partitioning and property protection. This brochure presents our solutions for the market segment Warehouse partitioning. Our business concept is to develop innovative steel mesh panel solutions to protect people, property and processes. Our lightweight but strong mesh panels can be combined into unique solutions and are built to withstand the toughest tests and environments. Read more about our systems at **www.troax.com**

TROAX®

Warehouse partitioning.

For more than 60 years we have been developing innovative steel mesh panel solutions for machine guarding, warehouse partitioning, and property protection. Today we are the market leader, and our products can be found all over the world – protecting people, property and processes.

Our services.

Troax is in the business of safety. Our steel mesh panel systems offer the safest and most flexible solutions on the market.

Whatever your safety needs may be, we will create a solution that is perfect for you. Our systems are marketed in three segments: Machine Guarding, Warehouse Partitioning and Property Protection.

SAFETY DOESN'T HAPPEN BY ACCIDENT
The Troax Test Centre is the heart of our business. Here, our products go through rigorous tests to maintain a high standard. We conduct impact tests on our panels, brackets and retainers on a daily basis. It is a job that requires both time and effort. But it is all worth it, because your safety is our priority.

SURVEYS ON SITE
One of our Technical salesmen will personally manage your inquiry and – if needed – carry out a detailed site survey on location. We use the Configura drawing tool to create each solution, which allows you to view our proposal in 2D and 3D before ordering any material. Our skilled assembly team can take care of the installation of your system while your contact at Troax will follow up your project.

PLANNING AND DESIGN
Our systems are adapted and designed to suit your specific needs, with everything intricately planned down to the smallest detail. With several security levels and a variety of different lock and door designs, our systems can be built to suit all kinds of application areas.

ASSEMBLY IS PART OF OUR OFFER

Troax offers help with assembly and installation of all our systems. Should you choose to assemble the products yourself, each Troax delivery includes clear user instructions and assembly guidelines, which make it easy to assemble our system on site.

IF YOU ARE STILL NOT CONVINCED…

• Each installation is unique and created to meet the customer's specific demands.

• Our mesh panels are extremely durable and can withstand the most demanding applications.

• Troax provides products of the highest quality and functionality, using automated and environmentally friendly production processes.

• Our systems are versatile and can easily be combined with each other, which makes them a good investment.

• We are the first mesh panel solution company in the world to have our test method certified by TÜV.

Type Approved
Safety
Regular Production
Surveillance

www.tuv.com
ID 0000049119

TÜVRheinland®
CERTIFIED

QUALITY ASSURED
BY TROAX • SWEDEN
TROAX

Local presence.
High Capacity.
Fast deliveries.

Material handling made safe.

Troax offers complete solutions for your entire logistics flow. Our warehouse partitioning solutions will make your material handling both safer and more efficient.

There are several dimensions to the safety of your material handling and logistics. Our world-class products, such as mesh panel partitions, mesh decking and anti-collapse systems, have been developed to make your material handling safe and simple. Made of wire mesh, our partitions offer excellent visibility and ventilation conditions.

Our systems also allow light to penetrate and sprinkler systems to reach through walls and shelves in case of a fire. All in all, our warehouse products will improve any logistics environment, from large distributions centres to areas that need to be protected, such as data centres. Troax will create a solution that fits your needs.

1 Troax Cage
Our boxes are suitable for outdoor and indoor use, as a temporary or permanent solution.

2 Hinged door
We offer hinged doors and with a variety of lo

6 Enclosures
The Troax Caelum wall system is flexible and can easily be adapted to fit in locations that are difficult to access.

7 Ceilings
Our mesh ceiling solution provides good visibility and ventilation. It allows light as well as water from sprinkler systems to penetrate. The strong beam ensures a stable and secure ceiling structure.

8 Storage units
Our storage solutions are available with mesh panels or steel panels. If the installation does not reach the ceiling, we recommend using mesh ceiling panels.

9 Protected a
Areas or products that tioned are effectively p Caelum modular wall s doors create appropria

...rs

...in several widths
...cking options.

3 Sliding doors

We offer sliding doors in several widths
and with a variety of locking options.

4 Mezzanines

Partitioning mesh walls on a mezzanine protect
both people and goods from falling objects.

5 Shelves

Our sturdy shelves are made from steel mesh,
which allows light as well as water from
sprinklers to penetrate.

...rea

...need to be parti-
...protected by our
...ystem. Our flexible
...ate access.

10 Truck aisles

Automated warehouses require safe and
effective solutions. The Caelum wall system
allows warehouse trucks to come through
without compromising the safety of personnel
or goods. The system is compatible with our
Panic Bar evacuation door.

Photo: Nedcon Megazijninrichtung B.V

11 Aerosol storage

This solution is excellent for storage of
explosive products. We offer mesh walls
with 25×25 mm mesh to suit the particular
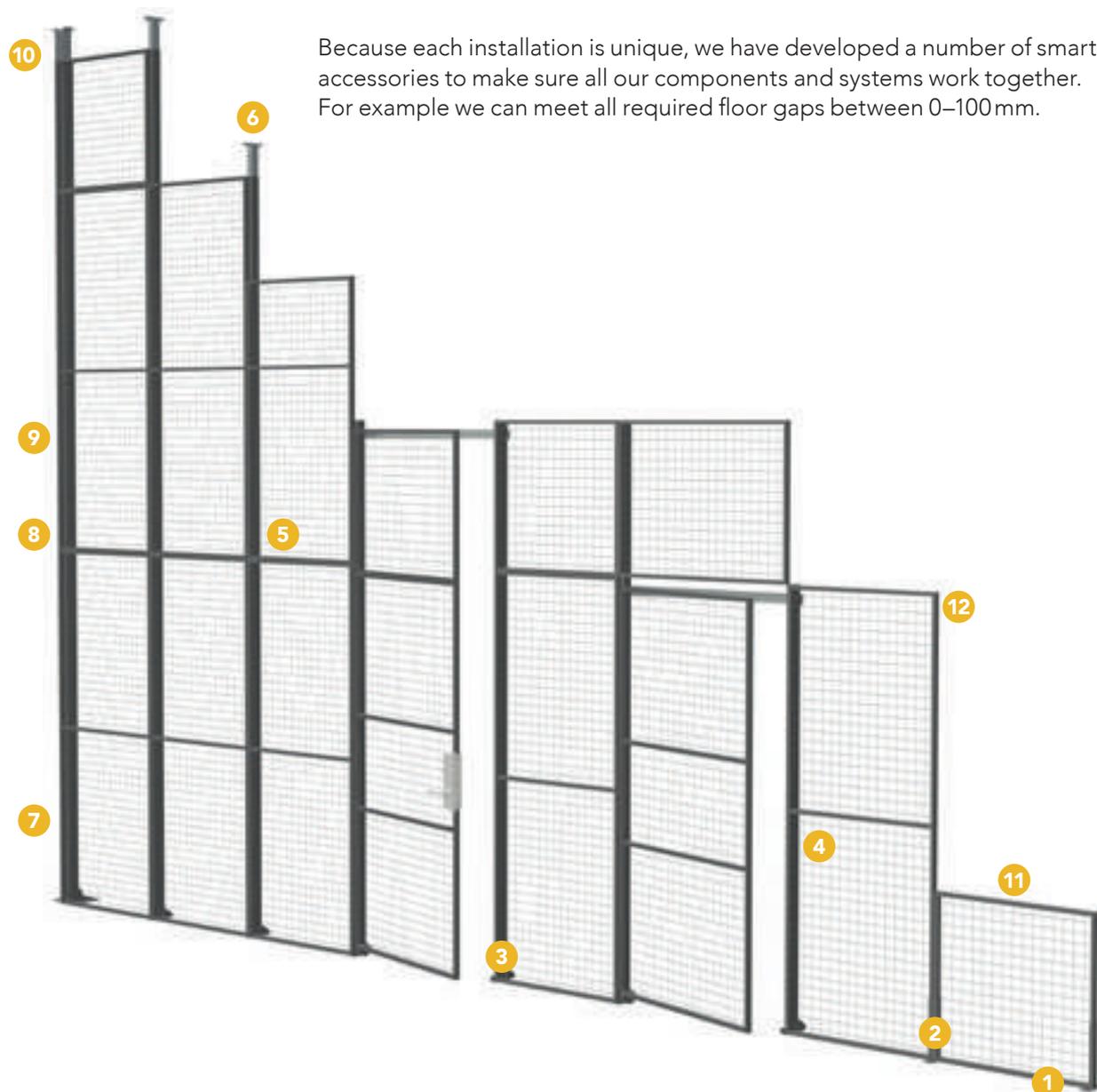requirement and specification.

12 Anti-collapse system

Our anti-collapse system is easily fitted using
brackets that fit most pallet racking types.
The screen prevents pallet spillage.

Combine our systems for unique solutions.

Our mesh panel systems can be combined in a number of ways to suit your material handling and logistics needs, which is an innovative way to give you an affordable and future-proof solution.

Because each installation is unique, we have developed a number of smart accessories to make sure all our components and systems work together. For example we can meet all required floor gaps between 0–100 mm.

1 **End-raising foot UR/UX**

This product is used when fitting panels in a corner, or as an end against a wall.

2 **Raising foot UR/UX**

This foot is used on panel joins where there is no post.

3 **Post**

Our posts have a stable design and are the backbone of our systems.

4 **Bracket 60×40 – post**

This product is used to locate posts behind panels. The brackets are easy to fit, with an even and neat-looking finish for the partition as a result.
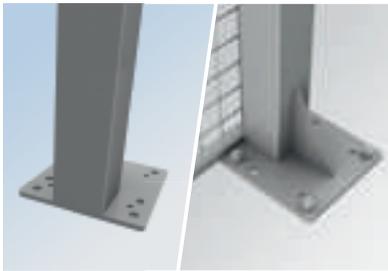

5 **Extension brackets**

These brackets are a smart solution for taller Caelum walls. Top fixings are recommended when building above 4,400 mm.

6 **Top fixing 60×40**

Used when fitting a high wall to the roof. Has a telescopic design to allow structural movement.

7 **Post 80×80**

These strong posts are the suitable for high freestanding walls when extra strength is needed.

8 **Bracket 80×80**

Locate posts behind panels. Simple to fit resulting in a neat flush finish for the partition.

9 **Extension brackets 80×80**

A smart solution for taller Caelum walls. Top fixing recommended when building beyond 4,400 mm.

10 **Top fixing 80×80**

Used when fitting a high wall to the roof. Has a telescopic design to allow structural movement

11 **Cut profile**

This is an easy-to-use and flexible solution for adjusting the height of mesh panels during installation without losing the system's strength.

12 **END profile**

This is an easy and flexible way to adjust the width of mesh panels during installation without losing the system's strength.

Wall systems for warehousing.

Our wall systems are based on mesh panels and steel sheet panels that are adaptable for high or low assembly and provide a range of safety levels. Our stable and durable partitioning walls have been developed to cover all your material handling needs.

50×50

50×50 mm mesh panels are an ideal solution for providing a safe working environment that allows natural light and ventilation.

Tube UR: 19×19×1 mm or **UX:** 30×20×1.25 mm

Wire UR: 2.5×2.5 mm or **UX:** 3.0×3.75 mm

Heights: 800, 1100* and 2200 mm

Widths: 200, 300, 700, 800, 1000, 1200 and 1500 mm

Height 1100 mm only for UR in widths 700, 1200 and 1500 mm

25×25

25×25 mm mesh panels are adapted for applications that require a high level of safety, such as storing aerosols, or hazardous or high-value goods. The panels allow natural light and ventilation.

Tube UR: 19×19×1 mm **Wire UR:** 2.5×2.5 mm

Heights: 800, 1100* and 2200 mm

Widths: 200, 300, 700, 800, 1000, 1200 and 1500 mm

Height 1100 mm only for widths 700, 1200 and 1500 mm

100×50

100×50 mm mesh panels are a lighter alternative to 50×50 mm, but still a perfect solution for providing a safe working environment.

Tube UR: 19×19×1 mm **Wire UR:** 2.5×2.5 mm

Heights: 1100* and 2200 mm

Widths: 200, 300, 700, 800, 1000, 1200 and 1500 mm

Height 1100 mm only for widths 700, 1200 and 1500 mm

Full Steel

UR SP modular full steel panels are ideal for creating storage areas for storing goods out of sight. They are made from profiled steel sheet and are available in a number of different standard widths.

Tube UR: 19×19×1 mm **Sheet Steel:** 0.7 mm

Heights: 2,200 mm

Width: 200, 300, 700, 800, 1,000 and 1,200 mm

All panels are delivered powder-coated as standard with a grey RAL 7037 finish.

The picture shows a secure storage installation using our Caelum system. The installation required an 11 metre high wall with attachment to the existing racking end frames. A double sliding door in a single rail was also installed for access.

Single hinged Door

We offer hinged doors in various widths with a number of locking options. Choose from Padlock, Assa cylinder, Euro cylinder, Electric strike or Panic Bar.

Standard dimensions	
Door leaf Width	980 mm, 1,180 mm
Door leaf Height	2,100 mm
Door Width	1,000 mm, 1,200 mm

Locking options: Padlock, Assa cylinder, Euro cylinder, Electric strike or Panic Bar.

Double hinged Door

We also offer double hinged doors in several widths with a number of different locking options.

Standard dimensions	
Door leaf Width	980 mm, 1,180 mm
Door leaf Height	2,100 mm
Door Width	2,000 mm, 2,400 mm

Locking options: Padlock, Assa cylinder and Euro cylinder.

Single Sliding Door (Single rail)

We offer sliding doors in various widths with a number of locking options.

Standard dimensions	
Door leaf Width	980 mm, 1,180 mm
Door leaf Height	2,100 mm
Door Width	900 mm, 1,100 mm, 1,900 mm, 2,900 mm

Locking options: Padlock, Assa cylinder, Euro cylinder and Electric strike.

Double Sliding Door (Single rail)

We also offer double sliding doors in several widths with a number of different locking options.

Standard dimensions	
Door leaf Width	980 mm, 1,180 mm
Door leaf Height	2,100 mm
Door Width	1,900 mm, 2,300 mm

Locking options: Padlock, Assa cylinder and Euro cylinder.

Double Sliding Door (Double rail)

You can also have your sliding door in a double rail. Perfect when you want to divide a secured space. Available in various widths with a number of different locking options.

Standard dimensions	
Door leaf Width	980 mm, 1,180 mm
Door leaf Height	2,100 mm
Door Width	2×900 mm, 2×1,100 mm

Locking options: Padlock, Assa cylinder and Euro cylinder.

Linear Sliding Door

When you need a door with a clear opening height, you can use our Linear Sliding Door. The design is such that no overhead track is required. This solution is therefore suitable for a forklift passage.

Standard dimensions	
Door leaf Height	2,100 mm
Opening width	2,800 or 4,000 mm
Construction width	7,200 or 9,900 mm

Locking options: Padlock, Assa cylinder and Euro cylinder.

Partition
with panels.

Areas or goods that need to be separated are effectively protected by our modular partition system Caelum. Mesh panels or steel sheet panels are an excellent and cost-effective alternative to solid wall installations, and they are a great complement to partitioning walls. Our wall systems can either be built to reach the existing ceiling 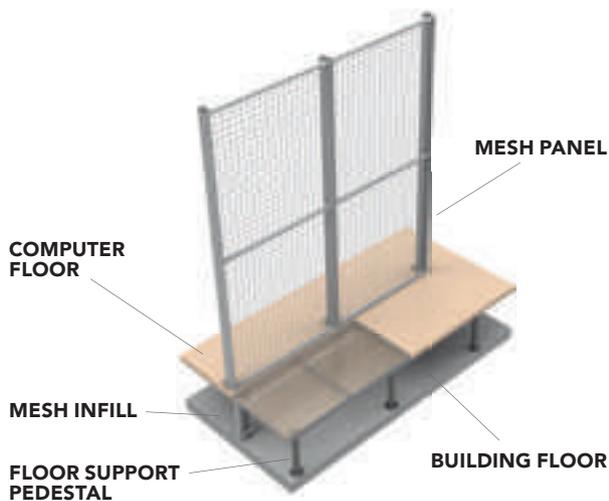or be combined with our mesh ceiling, which provides an excellent overview, allows light and water from sprinkler systems to penetrate and prevents trespassing. The panels are easily put up, using smart fittings, and can be used in most material handling and logistics environments. Our Z beam, which is very strong, ensures a secure and stable ceiling structure.

Secure your server room.

Our modular panel systems – with or without mesh ceilings – can be adapted to fit any height. The mesh panels allow proper air circulation and can be built around existing installations and obstacles. Our offer includes complete installations with mesh or steel sheet panels.

The latter are primarily used to protect an area from view. There are several solutions to provide a proper floor environment for computers and servers, as well as solutions to protect the area above a suspended ceiling.

COMPUTER FLOOR

MESH PANEL

MESH INFILL

FLOOR SUPPORT PEDESTAL

BUILDING FLOOR

A cost-effective and flexible solution.

Adaptable to fit any height.

Can be combined with our mesh ceilings.

Allows proper air circulation, light and sprinkler penetration

Machine safety with mesh systems.

Automated warehouse environments are subject to increased safety demands. They require sturdy machine guarding systems with controlled access for authorised personnel.

Troax offers flexible systems of modular protective walls for warehouse partitioning and machine guarding. The systems are based on posts with different fittings that are combined with sturdy panels of metal mesh, steel sheet or polycarbonate. The posts fit several fitting systems so you can create the optimal combination for your machine guarding. Troax machine guarding systems have captive fixings that remain in place even when the guard is disassembled, as required by the Machinery Directive.

Posts
The standard 60×40 mm post comes in three heights: 1,400 mm, 2,200 mm and 3,000 mm. The welded base results in a stable and robust construction. There is also a larger 80×80 mm post, suitable for rough environ-ments where there is a greater risk of collision or impact with objects.

Polycarbonate panels
Transparent ST PC polycarbonate panels that offer good overview.

Steel sheet panels
With URSP steel sheet panels you can create fully covered cells.

Steel mesh panels
The machine guarding panels have a classic look and a mesh size of 20×100. The panel frame is available in two dimensions: ST20 19×19 mm and the stronger ST30 30×20 mm

Technical information
The wall systems have a standard height of 2,200 mm and 1,400 mm, with a 150 mm floor gap to allow for easier cleaning. The panels are available in several widths, from 200 mm up to 1,500 mm. Both the panels and the posts can be customised to create the desired dimensions. Fitting details, panels and posts for all our systems are kept in stock for direct delivery.

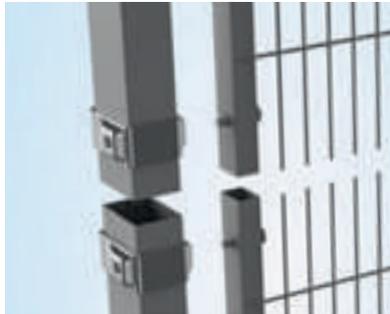Our wide range of fixings, combined with the right panels and posts for your applications, provide maximum personnel and machine safety.

Smart Fix

Smart Fix is our well-proven safeguard system with many unique properties. The fixings are tightened to the post and can easily be moved up and down to adjust for uneven floors and tunnels for conveyors.

Rapid Fix

Rapid Fix is a cleverly designed machine safety system that offers a quick and easy access to the hazard zone. The lower bracket has a slot that the panel hooks into, and the upper bracket has an innovative locking mechanism that snaps the panel into its correct position.

The system is disassembled from inside the cell, and a tool is used to release the panel. All fixings are fastened to the panel and posts remaining attached to the guard when disassembled, fulfilling the requirements of current standards and rules for machine guarding.

Strong Fix

Based on 80×80 posts and a strong bracket, the Strong Fix system is the best alternative for harsh environments or when the risk for an impact is high.

The heavier posts create a robust impression and together with our ST30 mesh panels, the system has been tested to withstand an impact of up to 2,000 joules.

Cylinder lock

We offer a number of different cylinder locks. Contact your local sales contact for more information.

Knob handle

When you need to open the door from the inside without using a key. Mainly used in automated warehouses.

Panic Bar

If you need emergency evacuation facilities, then choose our Panic bar door. The door is available as a hinged door with cylinder locking. Contact your seller for more information.

Provides maximum personnel and machine safety.
Complies with the European Machinery Directive.
Provides controlled access for authorised personnel.

QUALITY
ASSURED
BY TROAX • SWEDEN
TROAX

Secure your pallet racks.

Our anti-collapse system prevents any risk of spillage from pallets in warehouse storages. This is a system that has been created for safe handling and storing of products in a logistics environment.

The Troax anti-collapse system, is the strongest on the market. It is a durable barrier against accidents caused by goods falling from or being mistakenly knocked off pallet racks, and it prevents any risk of overloading in high-stacking situations.

The system is made from fully welded mesh and steel frames, and is strong and durable. The panels are available in three models with different safety levels to suit your specific needs. Anti-collapse panels are easy to mount using our sturdy brackets, which fit the majority of pallet racks.

Mesh panels are the basis of our anti-collapse system. They are available in three mesh sizes to suit different types of goods. The Troax anti-collapse system can be combined with pallet racks of various sizes. Choose between panels from 700 to 1,500 mm wide, with a height of 1,100 or 2,200 mm. The standard grey colour is neutral and makes it easy to see through the mesh, but panels can be supplied in your choice of colour – or galvanised.

Panel (HxW) mm:
2,200×700
2,200×1,200
2,200×1,500
1,100×700
1,100×1,200
1,100×1,500

Available in mesh sizes 50×50, 100×50 and 25×25 mm

Technical information	
Frame:	19×19×1.0 mm
Wire:	2.5×2.5 mm
Finish:	Powder paint, Grey RAL 7037

Available with hot-dip galvanised finish.

Ultima Bracket
Ultima 150 mm
Ultima 210 mm

Musca Bracket
Musca 50 mm, pre-galvanised
Musca 100 mm, pre-galvanised
Musca 150 mm, pre-galvanised
Musca 200 mm, pre-galvanised
Musca 250 mm, pre-galvanised
Musca 300 mm, pre-galvanised

| Directly against rack |
| --- |
| 0 mm |
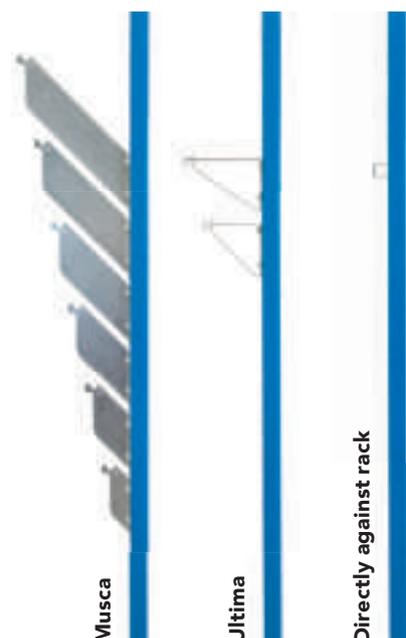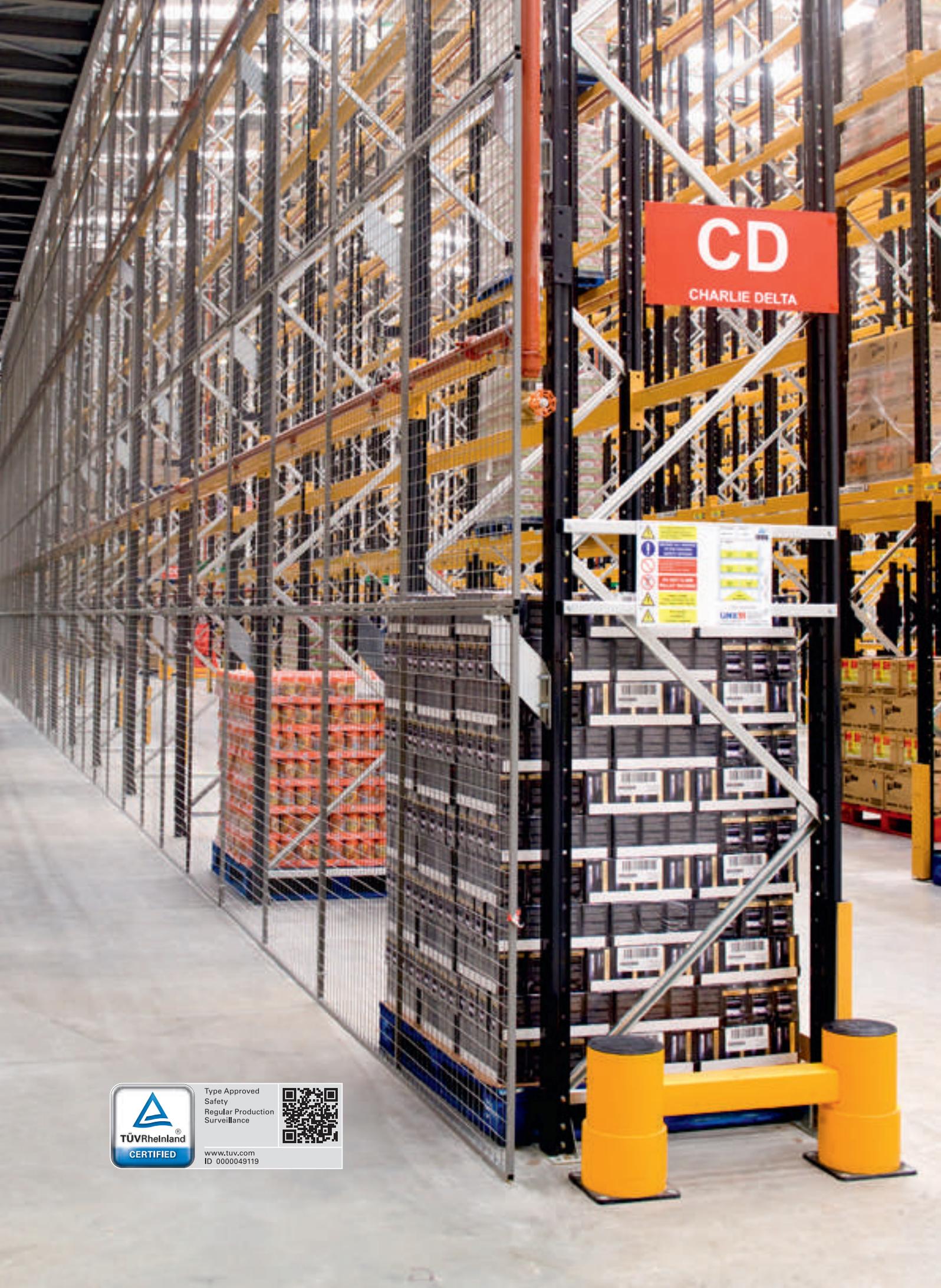
Musca

Ultima

Directly against rack

CD

CHARLIE DELTA

THE PENDULUM TEST METHOD.

We do a lot of different pendulum tests on our product systems. The certification by TÜV Rheinland is the industry's first standard for anti-collapse systems. This makes us proud, since we are the ones who created it.

The purpose of the pendulum test is to document the effect of a high-energy impact test of 2,500 joules on our anti-collapse system with bracket. At the test, a pendulum of 160 kilograms was adjusted so that the impact hit the middle of the mesh in one of the panels. The impact test of 2,500 joules is approximately 160 kilograms at 20.1 km per hour.
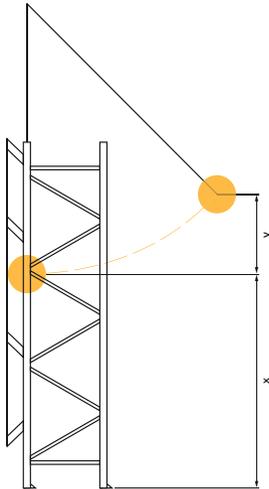
TÜV Rheinland standard 2 PfG 2529/04.15

The result was good; the anti-collapse system with bracket withstood the impact. There were no penetration and no parts departed. All panels, brackets, and retainers remained attached. We are happy that our test method is certified. This means that our anti-collapse system with bracket has good quality, and most importantly, that you are safe.

Type Approved
Safety
Regular Production
Surveillance

www.tuv.com
ID 0000049119

Read about our anti-collapse system, the Musca bracket and Ultima bracket at **www.troax.com**

Accessories. The Troax anti-collapse system is easily adapted to fit your warehousing system. Our anti-collapse mesh is mounted with brackets that fit the majority of pallet racks. Accessories including fixings and fasteners complete the system. The range of accessories also includes cut sections for adjusting the panels in places where the standard measurements are not completely perfect.

Musca Bracket with secure

Ultima Bracket

Kit Musca clamp

Kit high Assembly

Ultima spacer

Musca clamp

High Assembly

Speed bolt

Prevents goods from falling or being knocked off racks.
Easy to mount and fits most pallet racks.
Available in the colour of your choice.

Troax Cage.

Troax Cage is a free-standing storage cage that is suitable for storing hazardous materials and protecting against theft or vandalism. The cage is available in six standard sizes and is designed using UX 450 mesh panels. Panels can easily be modified on-site if your application should change. A galvanized finish makes the cage ideal for outdoor use, but it can also be supplied with a powder coat finish for indoor use. The Troax Cage is supplied with hinged double doors that open 270 degrees, allowing for easy forklift or pallet truck access. The cage can also be supplied with a hinged single door with a padlock hasp. The cages are quick and easy to install and also provide direct visibility of items in storage.

Assa

Euro cylinder

Padlock

Troax Cage	
Width	2,200 mm
Depth	200–6,000 mm
Height	2,200 mm

Mesh shelves
for versatility.

Troax mesh shelves can easily be adapted to fit most warehouse solutions, including those with an integrated backstop and/or dividers.

Troax standard drop over shelves are available in several different depths and widths to fit the most common pallet racks. Troax also offers tailor-made, specifically adapted mesh shelves, which are a cost-effective solution for specific needs. The size of the mesh decking can be adapted to fit different products, and the size of the overhang can be adjusted – for example, so it does not conceal the pallet label.

Providing your working environment with a high level of safety

The shelf is primarily intended as an "anti-collapse" or "fall protection" system. With this system some permanent deformation can occur even before the specified UDL is achieved. If no permanent deformation can be accepted, the shelf can be used with lower capacity. The shelf is designed with a safety factor of at least 1.3

Bespoke – When you need more than one shelf

The great advantage of the Troax shelving system is that the shelves can be adapted to suit your requirements. For example, you can have a shelf with integrated back stop and/or dividers. Additionally, the size of the mesh can be adapted to best suit your products and the size of overhang can be adjusted, for example, to ensure the pallet labels are not obscured. Our bespoke options provide a shelving system that is both cost effective solution and customised. Contact us today to discuss your requirements!

A cost-effective solution.

**Can be used for anti-collapse purposes.**

Allows water from sprinkler systems to penetrate.

Provides good visibility.

View your Troax solution before ordering.

It can be difficult to imagine how your solution will look like before it has been delivered and assembled. At Troax, we use a comprehensive drawing and rendering program, called Configura, which allows you to view our proposal as 2D and 3D-generated drawings before placing your order.

Read more about Troax at **www.troax.com**. Here you will also find product data sheets, 3D files and much more for download.
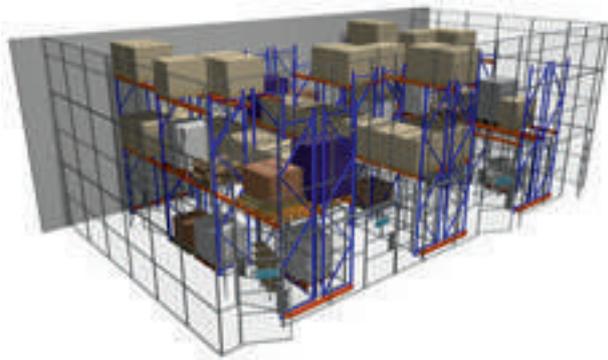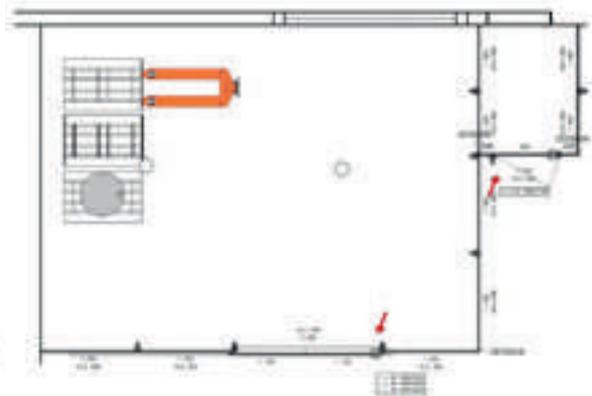
Local & global presence.

Troax is represented in more than 30 countries and has 24 sales companies of its own.
We aim to strengthen our position worldwide and expand our business on each continent.

At Troax, we meet your needs through local sales offices, backed up by daily deliveries from the world's largest warehouse for mesh panels, Troax in Hillerstorp, Sweden.

STRONG MARKET SEGMENTS
Our systems are marketed in three segments: Machine guarding, Warehouse partitioning and Property protection.

1. MACHINE GUARDING
Today's modern industry, with its advanced processes, places significant demands on safety. In particular, there is a great need for controlled access for authorised personnel. Our mesh panels are based on a carefully developed modular system that also includes special adaptations.

2. WAREHOUSE PARTITIONING
Troax can meet all requirements for storage and security. We are suppliers to all types of industry – from traditional manufacturers that require large-scale flows and volumes through their factories, to facilities with high-bay storage and retail storage. We can meet all your requirements and we offer complete solutions.

3. PROPERTY PROTECTION
Whether a question of new development or renovation of an existing installation, we are convinced that you will find our products easy to work with. Your unique needs and our creativity have contributed to our constant product development, giving rise to our motto: "Secure storage must be simple."

Making your world safe.

There are dangers for people, property, and processes in the world.
But there is no need to worry. Because we always strive to make it safe.
We are there, at your workplace, at your friends' and families' workplaces, at your home,
and at your friends' and families' homes. You may not always see us or think about us,
but we are always there, protecting and making your world safe, wherever you are.

Read more at troax.com

TROAX®

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